

COMPLIANCE TO DRUG PRESCRIBING PATTERN AMONG MENTAL DISORDER PATIENTS, USING WHO PRESCRIBING INDICATORS IN DEPARTMENT OF PSYCHIATRY AT A TERTIARY CARE HOSPITAL IN MANDYA: A CROSS-SECTIONAL STUDY***¹Dr. T. Balasubramanian, ²Basil Kuruvilla and ³Dr. Vikneswari A.**¹Professor and Principal, Bharathi College of Pharmacy, Mandya, Karnataka – 571422.²Pharm D., Department of Pharmacy Practice, Bharathi College of Pharmacy, Mandya, Karnataka – 571422.³Professor and Head, Department of Pharmacy Practice, Bharathi College of Pharmacy, Mandya, Karnataka – 571422.***Corresponding Author: Dr. T. Balasubramanian**

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ABSTRACT

Psychiatry is the medical specialty devoted to diagnosis, prevention and treatment of mental disorder; these include maladaptation's related to mood, behaviour, cognition and perception. According to WHO 450 million people currently suffer from mental disorder, treatments are provided by various mental health professionals. A mental disorder is characterised by a clinically significant disturbance in an individual's cognition, emotional regulation, or behaviour. It is usually associated with distress or impairment in important areas of functioning. And International agencies like the World Health Organisation (WHO) and the International Network for Rational Use of Drugs (INRUD) have recommended standard drug use indicators, which help us know the shortcomings in our prescription writing. In this cross-sectional studies discuss about the compliance to drug prescribing pattern among mental disorder patients, using who prescribing indicators a total 152 patients and their records helped to conduct this study in a tertiary hospital. We concluded that the average number of drugs per encounter with an ideal WHO value was higher than the ideal value. The percentage of drugs prescribed in generic form and the percentage of encounters with antibiotics are lower than their ideal values. And the percentage of encounters with injections is slightly higher than the ideal value. This all-obtained value doesn't meet the ideal WHO value. Treatments are provided by various mental health professionals.

KEYWORDS: According to WHO 450 million people currently suffer from mental disorder, treatments are provided by various mental health professionals.

INTRODUCTION

A mental disorder is characterised by a clinically significant disturbance in an individual's cognition, emotional regulation, or behaviour. It is usually associated with distress or impairment in important areas of functioning.^[1]

Mental disorders are usually associated with significant impairments in socioeconomic skills and person-to-person interactions. It has been found that the majority of mental disorders arise in low- and middle-income countries.^[2]

International agencies like the World Health Organisation (WHO) and the International Network for Rational Use of Drugs (INRUD) have recommended standard drug use indicators, which help us know the shortcomings in our prescription writing. Drug prescribing patterns vary among different geographical

areas and are influenced by patient characteristics, type of prevalence, cultural environmental influences, socioeconomic status, the availability of newer drugs, and the prescribing habits of physicians.

Findings from the epidemiologic catchment area study, a comprehensive survey of psychiatric disorders demonstrated that it is primary care physicians who are on the frontlines of the mental health system. Nearly 11% of Indians above 18 years are suffering from mental disorders as per the National Mental Health Survey (NMHS) 2016.4 In 2017, 197.3 million people had mental disorders in India. The treatment gap is a useful indicator for accessibility, utilisation, and quality of health care, and undoubtedly, a very high treatment gap would result in increased disease burden. Currently, the treatment gap for severe mental disorders (73.6%), common mental disorders (85%), and substance use disorders (91.1%) is as per the NMHS survey in 2016. In

less developed countries, the treatment gap varies between 76% and 85%. It is different for different mental illnesses.^[9]

Globally, more than 50% of all medicines are prescribed, dispensed, or sold inappropriately, and half of the patients fail to take them as required. In addition, about 33% of the world's population is unable to access essential medicines.^[10]

MATERIAL AND METHODS

This is a cross-sectional study conducted after getting ethical approval. This study was conducted in MIMS Teaching Hospital, Mandya, Karnataka. It is a 650 bedded Tertiary Care Hospital, Providing specialized health care to all strata of people in and around Mandya and rural population ER.

All the relevant data was obtained from the patients' medical records and through counselling the patients who visited the Out Patient Department (OPD) or In-Patient Department (IPD).

Eligible patients were enrolled based on inclusion and exclusion criteria. The data collection form which was made by department of pharmacy practice was used for collecting the details. This form mainly contains demographic details, current medication, past medical and medication history, treatment chart and other relevant data needed for present study were collected.

The data were subjected to descriptive statistical analysis using Microsoft Excel. Microsoft Word and Excel have been used to generate different graphical data and tables.

RESULTS AND DISCUSSION

Based on our study of 152 patients and their records, 100 patients were male and 52 patients were female, their proportions being 66% and 34%, respectively. The mean age of the study subjects was 52 ± 18.12 .

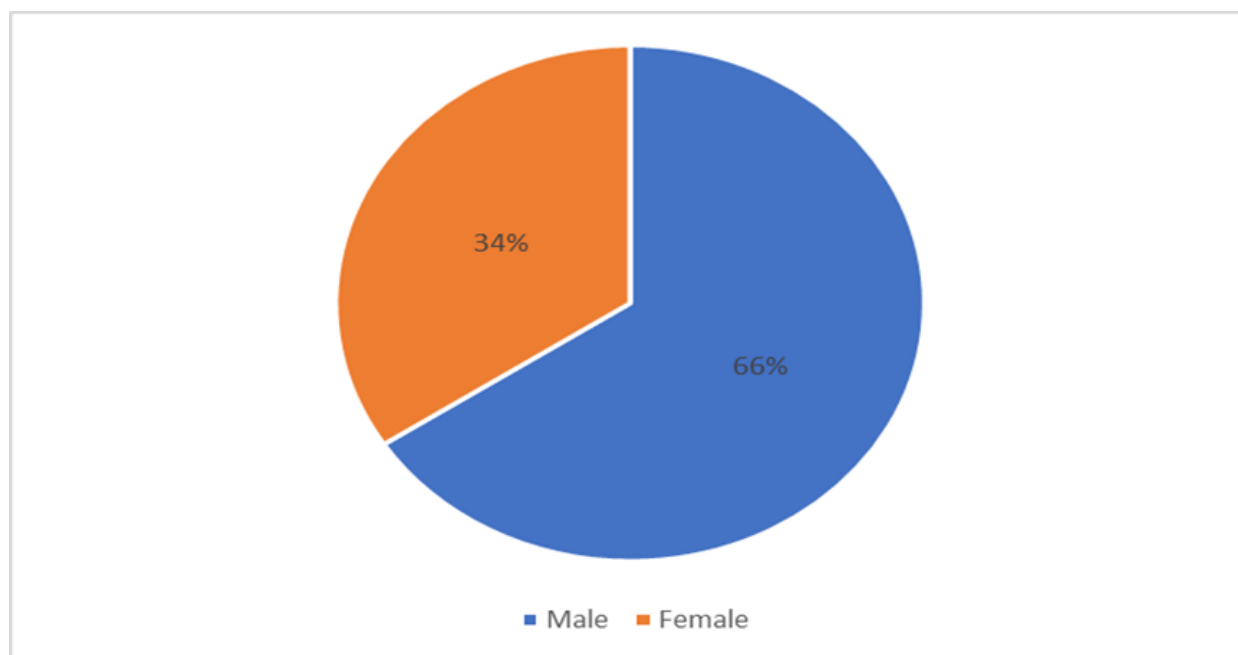


Figure 1: Distribution of Patient Based on Gender.

Categorization of Patients based on Age

In our study, all patients were divided into five age groups. It was found that more patients were in the age

group of 31 to 45, which is about 44.08% of total patients. The smallest proportion of patients were under the age of 18, accounting for 2.63%.

Table 1: Categorization of Patients based on Age.

Age	Male	Female	Total	Percentage
Below 18 years	2	2	4	2.63%
18 - 30 years	26	18	44	28.95%
31 - 45 years	51	16	67	44.08%
46 - 60 years	16	13	29	19.08%
Above 60	5	3	8	5.26%
Total	100	52	152	100%

Distribution based on Disease

Based on our study, total 152 patient data were analysed and found that a greater percentage of 35.53% of patients

are diagnosed with Alcoholic Dependence Syndrome (ADS) and a lower percentage of 0.66% patients suffer from Adjustment Disorder.

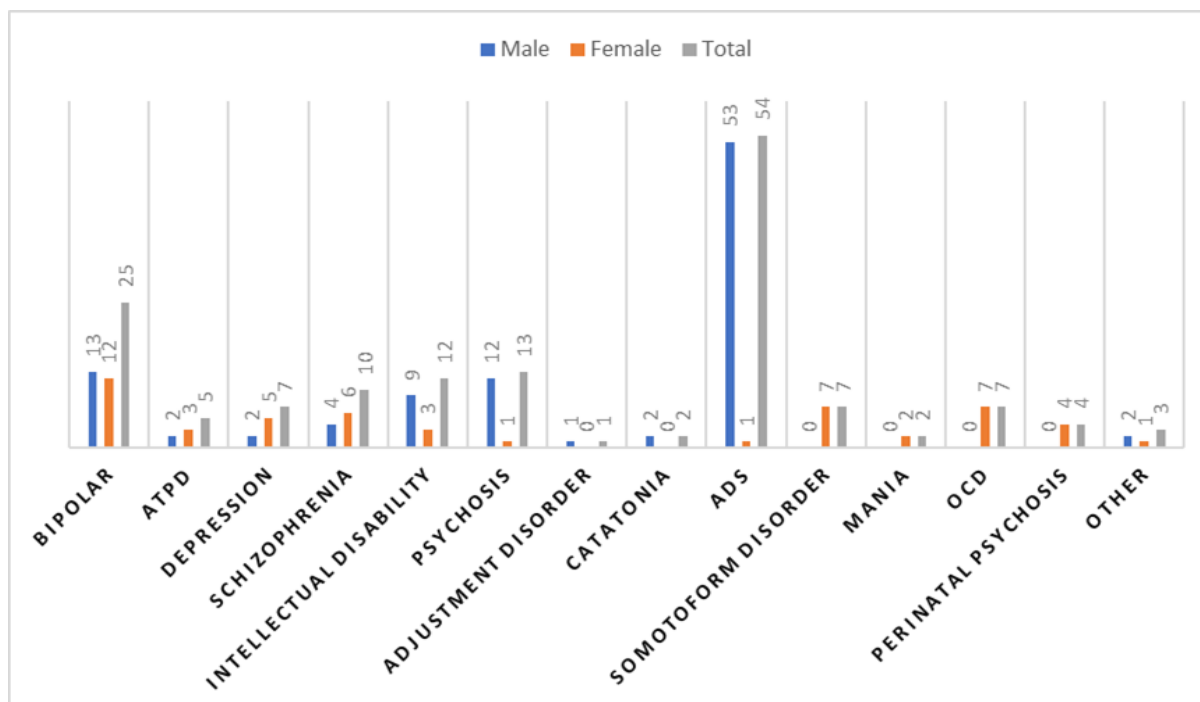


Figure 2: Distribution based on Disease.

Class of Drug Prescribing Pattern of Mental illness

Based on our study, 1112 drugs are prescribed, and out of those, 620 are mental illness drugs. The most prescribed

class of drugs is antiepileptic drugs, which is about 26.26%, and the least prescribed class is anticholinergic drugs, which is about 2.88%.

Table 2: Class of Drug Prescribing Pattern of Mental illness.

Class of Drugs	No of Drugs	Percentage
Antiepileptic	292	26.26%
Antidepressants	50	4.5%
Antipsychotic	246	22.12%
Anticholinergic	32	2.88%

Drug Prescribing Pattern of Antibiotic, Antipyretic, Antacid and Vitamins

Based on our study, out of 152 patients, the greatest number were prescribed vitamins and minerals, which is

about 11.87%. followed by antacids and antiulcers, and antibiotics. The least prescribed drugs are analgesics, antipyretics and NSAIDs, which are about 1.08%, respectively.

Table 3: Drug Prescribing Pattern of Antibiotic, Antipyretic, Antacid and Vitamins.

Class	Number	Percentage
Antibiotics	20	1.80%
Analgesic, Antipyretic and NSAID	12	1.08%
Antacid and Antiulcer	114	10.25%
Vitamin and Minerals	131	11.87%

Distribution Based on Route of Administration

a total of 1112 drugs were prescribed, of which 63% were per oral followed by IV, which counts for 24%, followed by IM, which counts for 13%, and the least were topical, which is about 0.1%, respectively.

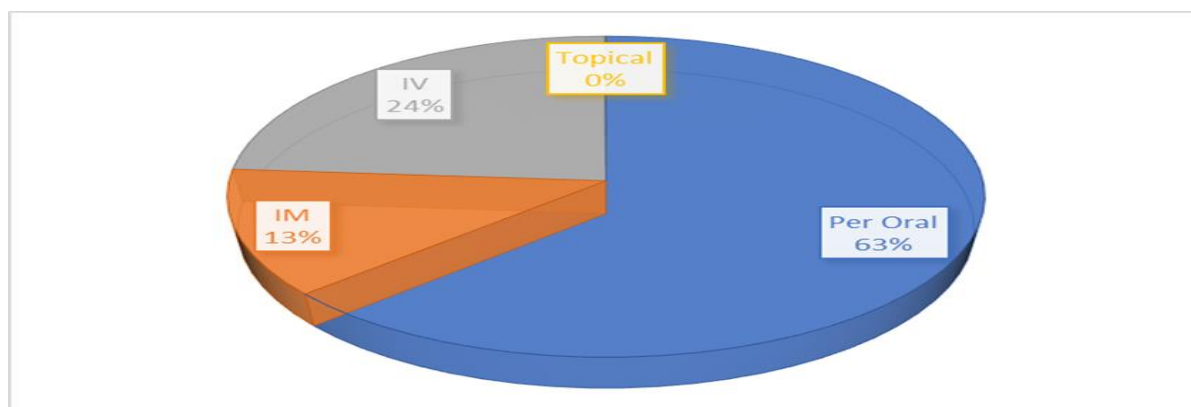


Figure 3: Distribution Based on Route of Administration.

Generic and Brand wise Distribution

Based on our study, comparing the prescribing drugs as generic and brand. The greatest number of drugs were

prescribed under generic names, which is about 88%. And brand name prescribed as 10%, respectively.

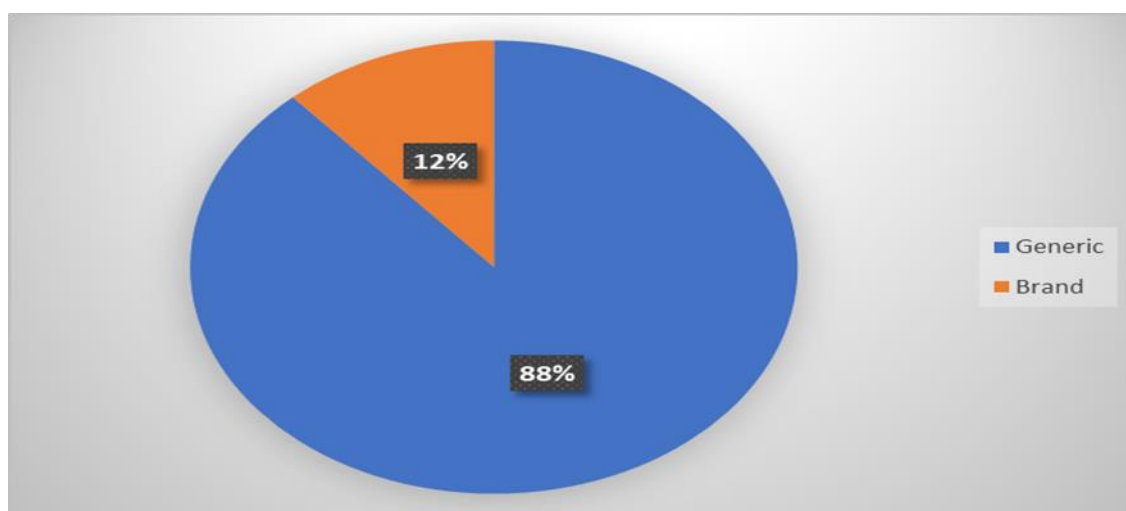


Figure 4: Generic and Brand wise Distribution.

World Health Organization Prescribing Indicators

Based on our study, the average number of drugs per encounter obtained were 4.07. which were found to be higher than the ideal WHO value. Out of 1112 prescribed

drugs 88% were generic, 1.8% were antibiotics and 36.51% were injections. Hence it shows that all the obtained value doesn't meet the ideal WHO value.

Table 4: World Health Organization Prescribing Indicators.

Prescribing Indicator	Obtained Value	Ideal WHO Value
Average no of Drugs per Encounter	4.07	1.6 - 1.8
Percentage of drugs prescribed by generic	88%	100%
Percentage of encounter with antibiotics	1.8%	20.0 - 26.8%
Percentage of encounter with Injection	36.51%	13.4 - 24.1 %

CONCLUSION

Our study concludes that male patients are more likely to suffer from psychiatric diseases and disorders. Among the study participants, people aged 31–45 were more admitted, and most of them were diagnosed with Alcoholic Dependence Syndrome and Bipolar Disorder. Antiepileptic and Antipsychotic classes of drugs are the most preferred, in that Lorazepam and Haloperidol are used for the treatment and management of disease

conditions. The WHO prescribing indicators do not meet the ideal value.

Based on our study, the average number of drugs per encounter with an ideal WHO value was higher than the ideal value. The percentage of drugs prescribed in generic form and the percentage of encounters with antibiotics are lower than their ideal values. And the percentage of encounters with injections is slightly

higher than the ideal value. This all-obtained value doesn't meet the ideal WHO value.

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