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**Original research article**

# DRUGS USED FOR PSYCHIATRIC DISORDERS AT A TERTIARY CARE HOSPITAL: SAFETY AND EFFICACY

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**Abstract**

Mental and behavioural disorders are prevalent worldwide. These conditions account for 12% of the global burden of disease 4. It is estimated that, they will account for the loss of 15% of the disability-adjusted life-years (DALYs). Globally, these illnesses have a point prevalence of about 10% for adults. After obtaining approval and clearance from the Institutional Ethical Committee, 320 cases were included for the present study. After obtaining the informed Consent from the patients/guardians, relevant data was recorded from patient's medical records and prescription orders. Among all the psychotropic drugs used, Risperidone had shown good improvement (n=88, 49.7%), Satisfactory improvement (n=39, 36.8%). Escitalopram showed good, satisfactory and best improvement in (25.4%), (41.5%) and (54.5%) of the population who were given the drug. Aminitriptyline and anticholinergic drug Trihexphenidyl also showed satisfactory results in terms of efficacy.

**Keywords:** Risperidone, safety, efficacy

## Introduction

Psychiatric disorders form an important public health priority [1]. Of the top ten health conditions contributing to Disability Adjusted Life Years (DALYs), four are psychiatric disorders.

Mental illness is associated with high levels of health service utilization and associated costs, and in developing countries these costs are mostly paid by patients [2].

According to the World Health Organization estimates, approximately 450 million people suffer from some forms of psychiatric disorders globally [3].

Mental and Behavioural disorders are prevalent worldwide. These conditions account for 12% of the global burden of disease [4]. It is estimated that by 2020, they will

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account for the loss of 15% of the disability-adjusted life-years (DALYs). Globally, these illnesses have a point prevalence of about 10% for adults 2.

Various epidemiological studies in India suggest the morbidity rate is of about 18-20 per thousand 2. Pharmacotherapy, psychotherapy and psychosocial rehabilitation are the three components in the management of these disorders. Pharmacotherapy forms a significant part of the comprehensive treatment of these illnesses [5].

The rapidly expanding field of psychopharmacology is challenging the traditional concepts of psychiatric treatment and research, and is constantly seeking new and improved drugs to treat psychiatric disorders. In this way, psychiatrists are continuously exposed to newly introduced drugs that are claimed to be safe and more efficacious [6]. Although psychotropic medications have had a remarkable impact on psychiatric practice that legitimately can be called revolutionary, their utilization and consequences on real life effectiveness and safety in actual clinical practice need continuous study.

**Methodology**

After obtaining approval and clearance from the Institutional Ethical Committee, 320 cases were included for the present study. After obtaining the informed Consent from the patients/guardians, relevant data was recorded from patient's medical records and prescription orders. Patients were called for follow up at 1st month, 2nd, 3rd and 6th month.

Psychiatric disorders include number of diseases such as depression, schizophrenia, bipolar and mood disorders, anxiety etc. for any psychiatric disorder to be diagnosed minimum 2 weeks the symptoms should be present.

For the diagnosis and treatment of psychiatric disorders. ICD-10 management guidelines and DSM 5 guidelines were followed.

**Inclusion criteria**

1. Patients of all ages and either sex.
2. Whose diagnoses are certain.
3. Patients who are starts on at least one psychotropic drug.
4. Patient/guardian who are willing to give informed consent.

**Exclusion criteria**

1. In patients.
2. Patients who are pregnant and lactating.
3. Those cases in which diagnoses are not certain.
4. With substance abuse related disorders, Patients with epilepsy.
5. Patients who are critically ill.
6. Patients with co morbid conditions like CHD and HIV positive etc.
7. Patients who do not come for follow up.

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## Results

**Table 1:** Showing diagnosis of psychiatric illness and frequency distribution

| Diagnosis | Frequency | Percentage |
|---|---|---|
| Total population. | 320 | 100 |
| Generalized anxiety disorder. | 36 | 11.3 |
| Bipolar affective disorder | 26 | 8.1 |
| Conduct disorder. | 1 | .3 |
| Depression | 81 | 25.3 |
| Insomnia. | 7 | 2.2 |
| Obsessive compulsive disorder. | 23 | 7.2 |
| Psychosis | 93 | 29 |
| Schizophrenia | 45 | 14.1 |
| Somatic disorder. | 8 | 2.5 |

In our study, psychiatric disorders in order of their prevalence were as follows.
Psychosis (29%), Depression (25.3%), Schizophrenia (14.1%), generalized anxiety disorder (11.3%), Bipolar affective Disorder (8.1%), OCD (7.2%), Somatic disorder (2.5%), Insomnia (2.2%), conduct disorder (0.3%).
Efficacy of the drugs was assessed by improvement of the symptoms using psychiatric rating scales, depending upon the magnitude of improvement efficacy was labeled as no improvement, good, satisfactory and best. Where good improvement shows minimal efficacy and best shows maximal efficacy.

**Table 2:** Efficacy of drugs used

| Efficacy | Frequency | Percentage | |
|---|---|---|---|
| No improvent | 26 | 8.1 | |
| Good | 177 | 55.3 | P value: 0.000 |
| Satisfactory | 106 | 33.1 | |
| Best | 11 | 3.4 | |

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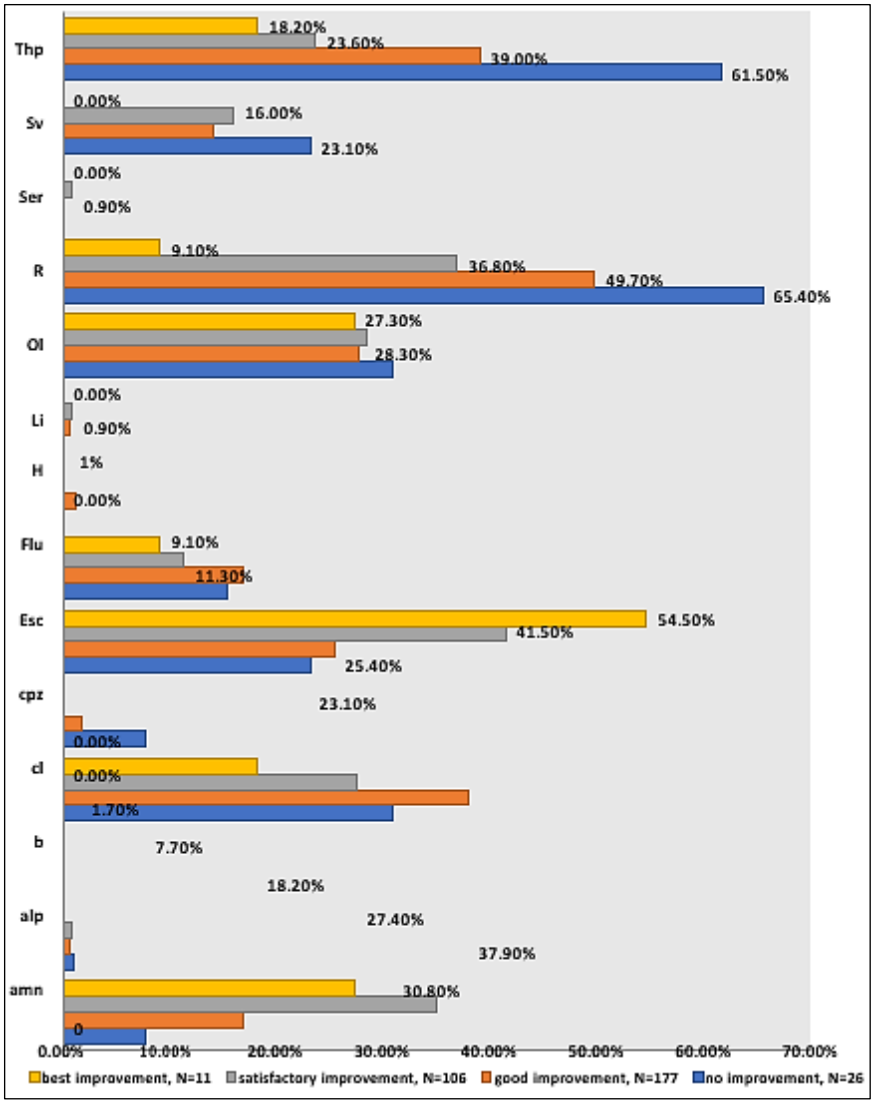


**Fig 1:** Clustered bar diagram showing individual drug in X-axis and their percentages in different efficacies on Y-axis

(amn = amitriptyline, alp = alprazolam, b = bupropion, cl = clonazepam, cpz = chlorpromazine, esc = escitalopram, flu = fluoxetine, h = haloperidol, li = lithium, ol = olanzapine, r = resperidone, ser = sertaline sv = sodium valproate, thp = trihexphenidyl).

Among all the psychotropic drugs used, Risperidone had shown good improvement (n = 88, 49.7%), Satisfactory improvement (n = 39, 36.8%). Escitalopram showed good, satisfactory and best improvement in (25.4%), (41.5%) and (54.5%) of the population who were given the drug. Aminitriptyline and anticholinergic drug Trihexphenidyl also showed satisfactory results in terms of efficacy.

**MEAN ADR:** 0.74± 0.79

Adverse Drug Reactions were noted and they are calculated individually as well as depending on the number of ADRs per person.

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**Table 3:** Shows number of ADRs, their frequency and percentage among study population

| ADR | Frequency (N) | Percentage (%) |
|---|---|---|
| | | |
| No ADR | 136 | 42.5 |
| ADR Present. | 184 | 57.5 |
| **P value: 0.000 (highly significant)** | | |
| **Type of ADR** | | |
| Alopecia | 6 | 1.9 |
| Anorexia | 3 | 0.9 |
| Dry mouth | 24 | 7.5 |
| Weight gain | 22 | 6.9 |
| Constipation | 10 | 3.1 |
| Gastritis | 11 | 3.4 |
| Tremors | 75 | 23.5 |
| Sweating | 25 | 7.8 |
| Dizziness | 2 | 0.6 |
| Fatigue | 2 | 0.6 |
| Increased appetite | 1 | 0.3 |
| Loss of taste | 1 | 0.3 |
| Menstrual irregularity | 15 | 4.7 |
| Postural hypotension. | 2 | 0.6 |
| Weight loss | 22 | 6.9 |
| Excessive sleepiness | 16 | 5 |
| Mouth ulcer | 1 | 0.3 |
| Skin ulcer | 1 | 0.3 |

**Discussion**

Effective treatment of mental disorders involves a comprehensive package of care with the aim of addressing all of the person's clinical, emotional and social needs, which includes combined psychosocial and pharmacological approach. The choice and combination of treatment is dependence on the type of mental illness, the severity of symptoms, the availability of options, decision determined by the individual in consultation with their health care providers.

In our study most prevalent disease among the psychiatric illnesses was Psychosis (n=93, 29%) followed by Depression (n=81, 25.3%). This was in accordance to the study conducted Fourier *et al.* [7], and Hugenholtz *et al.* [8], where most common psychiatric illness was acute psychotic disorder.

The incidence of ADR was found to be 42.5% in our study. Average ADR was 0.74± 0.79. (Mean ± SD).

Most frequent ADR was Tremors (n=75, 23.5%) seen maximum in patients taking atypical antipsychotic Risperidone followed by Excessive sweating (n=25, 7.8%) seen in SSRI Escitalopram, Dry mouth (n=24, 7.5%) was seen in most patients taking Clonazepam. Most of the adverse drug reactions were tolerable and/or managed

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symptomatically.

**Conclusion**

Among all the psychotropic drugs used, Risperidone had shown good improvement (n=88, 49.7%), Satisfactory improvement (n=39, 36.8%). Escitalopram showed good, satisfactory and best improvement in (25.4%), (41.5%) and (54.5%) of the population who were given the drug. Aminitriptyline and anticholinergic drug Trihexphenidyl also showed satisfactory results in terms of efficacy.

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