



## An Observational Study of drug use patterns in Depression patients in an Outpatient Department

Authors

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### Abstract

*Depression is an extremely common illness affecting people of all ages, gender and different socioeconomic groups all over the world. Globally, an estimated 322 million people were affected by depression in 2015. As per National Mental Health Survey (NMHS) (2015-16) in India, a total of over 45 million person suffered with depression in 2015. A Prospective observational study was conducted in 100 patients and pertinent information was collected and prescribing pattern was analyzed. Among 100 cases of depression collected, we observed that monotherapy (61%) was preferred over dual therapy (37%). Selective Serotonin Receptor Inhibitors (SSRI) were the most common class of drugs used followed by tricyclic antidepressants. Fluoxetine (45.9%) was most commonly prescribed drug in monotherapy and Escitalopram and Clonazepam (54%) combination therapy is most frequently used combination therapy. The findings of our study were similar to those of other studies conducted to evaluate the use of antidepressants.*

**Keywords:** Depression, monotherapy, SSRI, Fluoxetine.

### Introduction

Depression includes a spectrum of conditions with episodes, illnesses and disorders that are often disabling in nature, vary in their severity (from mild to severe) and duration (from months to years) and often exhibit a chronic course that has a relapsing and recurring trajectory over time<sup>[1]</sup>. Depression is one of the leading causes of disease burden globally and in low- and middle-income countries (LMICs). Globally, depression is ranked as the single largest contributor to non-fatal health loss, accounting for 7.5% of global years lived with disability (YLDs) and 2.0% of global

Disability Adjusted Life Years (DALYs) in 2015<sup>[2]</sup>. DALYs for a disease are the sum of the Years of Life Lost due to premature mortality (YLL) in the population and the Years Lost due to Disability (YLD) for incident cases of the health condition.

According to Global Health Estimates 2015, depressive disorders accounted for nearly one third of the total DALYs caused by mental and substance use disorder<sup>[3]</sup>. It is projected to be the second leading cause of disease burden globally and third leading cause of disease burden in LMICs by 2030<sup>[4]</sup>. India accounted for 15% of

global DALYs attributable to mental, neurological and substance use disorders (31 million DALYs) with depression, accounting for 37% (11.5 million DALYs) in 2013. By 2025, DALYs attributable to depression are projected to rise by roughly 2.6 million (22.5%) due to population growth and ageing<sup>[5]</sup>. As per National Mental Health Survey (2015-16) in India, one in 20 (5.25%) people over 18 years of age have ever suffered (at least once in their lifetime) from depression amounting to a total of over 45 million persons with depression in 2015.

### Types of Depression

DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th Edition), 8 specific disorders are described in the depressive disorders:

1. disruptive mood dysregulation disorder,
2. major depressive disorder (including major depressive episode),
3. persistent depressive disorder (dysthymia),
4. premenstrual dysphoric disorder,
5. substance/medication- induced depressive disorder,
6. depressive disorder due to another medical condition,
7. other specified depressive disorder, and
8. unspecified depressive disorder.

The first-line treatment for depression constitutes antidepressant medication, psychotherapy, or a combination of the two. Antidepressant drugs are effective across the full range of severity of major depressive episodes. Antidepressant medications have been grouped as follows:

1. Tri cyclic Antidepressants –  
Tertiary amines-Amitriptyline, Clomipramine, Doxepin, Imipramine  
Secondary amines-Desipramine, Nortriptyline
2. Selective Serotonin Reuptake Inhibitors -  
Fluoxetine, Sertraline, Paroxetine, fluvoxamine, citalopram and escitalopram;
3. Selective Nor epinephrine Reuptake Inhibitors, which include Venlafaxine,

- Desvenlafaxine and Duloxetine, Levomilnacipran
4. Aminoketone- Bupropion
5. Triazolopyridines- Nefazodone, Trazodone
6. Tetracyclics- Mirtazapine
7. Monoamine Oxidase Inhibitors- Phenelzine, Selegiline (transdermal), Tranylcypromine, Isocarboxazid<sup>[6]</sup>

The goals of therapy are reduction of symptoms, prevention of relapses and, ultimately, complete remission. The acute phase requires 6 to 8 weeks of medication during which patients are seen every one or two weeks – and more frequently in the initial stages – for the monitoring of symptoms and side-effects, dosage adjustments, and support. The successful acute phase of antidepressant drug treatment or psychotherapy should almost always be followed by at least 6 months of continued treatment. Follow up is recommended once or twice a month. The primary goal of this continuation phase is to prevent relapse. The phase known as maintenance pharmacotherapy is intended to prevent future recurrences of mood disorders, and is typically recommended for individuals with a history of three or more depressive episodes, chronic depression, or persistent depressive symptoms. This phase may extend for years, and typically requires monthly or quarterly visits. Depression-specific therapies include cognitive behavioral therapy and interpersonal psychotherapy, and emphasize active collaboration and patient education<sup>[3, 7]</sup>.

Psychotherapy refers to planned and structured interventions aimed at influencing behavior, mood and emotional patterns of reaction to different stimuli through verbal and non-verbal psychological means<sup>[3, 7]</sup>.

Cognitive behavioral interventions are aimed at changing thought patterns and behavior through the practice of new ways of thinking and acting. Various types of psychotherapies – particularly cognitive behavioral interventions and interpersonal therapy are effective in the treatment of depressed patients and help them to learn how

to improve coping strategies and lessen symptom distress<sup>[3]</sup>.

Nevertheless, antidepressant medications do differ in their potential to cause particular side effects such as adverse sexual effects, sedation, or weight gain. When side effects occur during treatment with an antidepressant, an initial strategy is to lower the dose of the antidepressant or to change to an antidepressant that is not associated with that side effect. When lowering the dose or discontinuing the medication is not effective, additional strategies may be considered<sup>[7]</sup>.

### Methodology

A prospective observational study was conducted in a psychiatric clinic in Warangal region over a period of 2 months. 100 Depression cases were collected and a pre-designed and pre-tested proforma was used to collect the required information.

**Inclusion Criteria:** Patients of age 10-80 years were included who were diagnosed with Depression.

**Exclusion Criteria:** In-patients and patients with other psychiatric illness were excluded.

### Results

Among the total 100 study patients, 35 were male and 67 were female. The age of the study patients was further divided into four age groups. They are 21-30 years, 31-40 years, 41-50 and greater than 50 years of age. Depression is mostly observed in 21-30 years (37%) of age group (Table 1). In the present study monotherapy (61 %) was preferred over dual therapy (37 %). The most preferred antidepressant drug combination was Escitalopram and clonazepam (54 %) (Table 3). Adjunctive therapy was given in most of the patients to treat the co-morbid conditions. Out of antidepressant agents prescribed, Selective Serotonin Reuptake Inhibitors (SSRIs) were the most commonly prescribed drugs. The most commonly prescribed antidepressant was Fluoxetine (45.9%) (Table 2). Most common concomitant medications in Major Depression was antianxiety drugs.

**Table 1:** Age wise distribution of data

Age	Percentage
21-30	37
31-40	33
41-50	18
>50	12

**Table 2:** Patients prescribed with monotherapy

Drugs	%
Fluoxetine	28 (45.9)
Desvenlafaxine	11(18.03)
Amitriptyline	13(22.3)
Duloxetine	4(6.55)
Bupripion	4(6.55)
Paroxetine	1 (1.63)

According to the National List of Essential Medicine, Fluoxetine and Amitriptyline are the essential drugs for Depression. Among them Fluoxetine was most frequently prescribed (45.9%) and the least prescribed was Paroxetine (1.63%).

**Table 3:** List of drugs used in combination therapy

Combination drugs	Percentage
Escitalopram + Clonazepam	54%
Desvenlafaxine +Clonazepam	45%

### Discussion

**Age and gender:** In the present study, Gender distribution has shown that the occurrence of depression is more in female (67%) compared to male (35%) which is similar to results of a study by Chattar *et al.*,2016<sup>[8]</sup>. Literature also mentions that females suffer from depression more than males. Biological, life cycle, hormonal and psychosocial factors (poverty and deprivation specifically in India) that women experience may be linked to women's higher depression rate<sup>[9]</sup>. However, a study was done by Grover *et al.*,<sup>[10]</sup> has shown equal sex distribution. The peak incidence of depression among sample size of 100 patients was observed in the age group of 21-30 years (37%) which is identical to the study conducted by Chattar *et al.*,<sup>[8]</sup> and contrary to Priyamadhaba Behera<sup>[11]</sup>. Stressful life event such as trauma, loss of a loved one, a difficult relationship, or any stressful situation often

triggers a depressive episode. Additional work and home responsibilities, caring for children and aging parents, abuse, and poverty also may trigger a depressive episode<sup>[12]</sup>.

**Pharmacotherapy:** In our study, most of the patients were on monotherapy (61%). This suggests that most of the patients responded to monotherapy. Monotherapy increases the compliance of the patients and decreases the possibility of side effects. In patients on monotherapy most frequently prescribed class of antidepressant was SSRI followed by TCA similar to Chattar *et al.*,<sup>[8]</sup>. Better tolerability and lesser side effects are the reasons for frequent use of SSRIs compared to TCAs. Fluoxetine (45.9%) was the most common antidepressant prescribed among the other antidepressants and also SSRIs similar to a study done by Mohan *et al.* This is in contrast to Chattar *et al.*,<sup>[8]</sup> and Mishra *et al.*,<sup>[13]</sup> where Escitalopram was the most commonly prescribed drug. Amitriptyline was the second most commonly prescribed drug.

The most commonly used combination is Escitalopram and Clonazepam (54%). It is in contrast to the study done by Chattar *et al.*<sup>[8]</sup>. Clonazepam is the preferred benzodiazepine with antidepressants as evidence from studies has suggested that it has the potential to increase the effects of SSRI and can partially suppress the adverse effects of SSRI<sup>[14]</sup>.

National Institute for Health and Clinical Excellence (NICE) guidelines suggest that benzodiazepines may be helpful for up to two weeks early in the treatment particularly in combination with SSRIs. Because of relatively safer side effect profile and decreased risk of drug-drug interactions, SSRIs were the most commonly used medication in patients having comorbid medical condition<sup>[15]</sup>.

### Conclusion

From our study, it is concluded that the incidence of depression is more in female. Selective Serotonin Receptor Inhibitors were the most

common class of drugs used followed by tricyclic antidepressants. Fluoxetine was most frequently prescribed antidepressant followed by Amitriptyline. The prescription trend was toward monotherapy. This study over all provides the outline of treatment pattern used in depression patients and the choice of antidepressant medication used. Further studies will be required to see the changing trends in prescribing and to improve the standard treatment in depression with rational drug use for better patient care. Clinical Pharmacist play a key role in counseling the patients and educating the patients about the disease and importance of compliance of medication.

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