

Clinical Depression: an Analysis of Treatment Patterns and Pharmacological Management

Aditya Parashar, Piyush Mittal

1. Research Scholar, Department of Pharmacy Practice, Teerthankar Mahaveer College of Pharmacy, Teerthankar Mahaveer University, Moradabad, India 2. Professor, School of Pharmacy, Sharda University, Greater Noida, India Abstract

ABSTRACT

Clinical depression, or major depressive disorder, is a serious illness that affects mood, thoughts, behaviour, and daily functioning. Persistent sadness, loss of interest, fatigue, and poor concentration can impair personal and professional life. Treatment pattern analysis helps identify commonly prescribed antidepressants, combination therapies, and prescribing trends according to depression severity. A prospective observational study was conducted to evaluate treatment patterns among patients with depression. Patient data were collected prospectively from clinical records and included age, gender, PHQ-9 severity, prescribed antidepressants, concomitant medications, and treatment combinations. Patients were categorised according to age and depression severity. Drug utilisation and prescribing patterns were assessed using frequency and percentage distributions. The study included 357 patients, with females (53.50%) slightly outnumbering males (46.50%). Most patients were aged 18–30 years (38.10%), while moderately severe depression was the most common PHQ-9 category (32.77%). Antidepressants were prescribed to 89.08% of patients, with escitalopram being the most frequently used (31.65%), followed by fluoxetine (22.69%). Clonazepam was prescribed in 54.90% of patients, while benzodiazepine-containing regimens were used in 66.11%. The most common combination was domperidone–rabeprazole (66.39%). The study showed that antidepressants were widely used in clinical depression, with escitalopram being the most frequently prescribed. Clonazepam was commonly used as concomitant therapy. Monotherapy was more common than combination therapy, highlighting the importance of rational prescribing, careful monitoring, and individualised treatment according to depression severity.

KEYWORDS

Clinical depression; Treatment pattern; Antidepressants; PHQ-9; Drug utilisation; Prescribing pattern.

Introduction-

Clinical depression, also known as major depressive disorder (MDD), is a serious mental health condition that can affect a person's mood, thoughts, behaviour, and daily functioning. It is an important public health concern because it can affect both mental and physical well-being and may lead to disability, poor work performance, reduced productivity, difficulties in personal relationships, and an increased risk of suicidal behaviour.¹

Depression is commonly associated with persistent sadness, loss of interest or pleasure, low motivation, fatigue, sleep disturbances, changes in appetite, poor concentration, and feelings of guilt or worthlessness. These symptoms can interfere with an individual's ability to manage daily activities and maintain normal social, academic, and professional functioning.²

Depression treatment usually involves pharmacological and non-pharmacological approaches. Antidepressants, particularly selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), and other antidepressant groups, are commonly used according to the patient's symptoms and clinical condition. Concomitant medications may also be prescribed to manage associated symptoms or other health conditions.³

Treatment pattern analysis helps in

understanding how depression is treated in routine clinical practice. It provides information on commonly prescribed antidepressants, monotherapy and combination therapy, concomitant medication use, and prescribing patterns according to disease severity.⁴ (Jain et al., 2022) In the present study, treatment patterns were evaluated based on demographic characteristics, PHQ-9 severity, prescribed antidepressants, concomitant medications, and commonly used treatment combinations. This analysis may help identify current prescribing trends and support more rational and individualised pharmacological management of clinical depression.⁵

Methodology-

A prospective observational study was conducted to assess the treatment patterns of patients diagnosed with clinical depression. This study was based on information obtained from the available clinical records of patients who received treatment for depression during the study period. Relevant patient information was systematically collected and entered into an Excel spreadsheet for analysis.⁶

The recorded demographic characteristics included age and sex, while clinical information included the severity of depression assessed using the Patient Health Questionnaire-9 (PHQ-9).

Patients were categorised as having mild, moderate, moderately severe, or severe depression according to their PHQ-9 scores. Age groups were defined to examine the distribution of depression across different age categories.⁷

The prescribed medications were reviewed to identify the type and frequency of the antidepressants used. The analysis included commonly prescribed antidepressants, such as selective serotonin reuptake inhibitors and other antidepressant classes. The use of monotherapy and combination antidepressant therapy was also evaluated. In addition, concomitant and supportive medications prescribed along with antidepressants were recorded to understand the overall medication patterns.⁸

Treatment patterns were further evaluated according to the severity of depression to identify differences in prescribing practices between patients with different levels of depressive symptoms. Commonly prescribed drug combinations and frequently used concomitant medications were also identified in this study.⁹

The collected data were analysed using descriptive statistics. Categorical variables were expressed as frequencies and

percentages, and treatment patterns were summarised according to the number of patients receiving each medication or treatment combination. The results are presented in tabular form to provide a clear overview of antidepressant utilisation and prescribing trends among patients with clinical depression.¹⁰

The study was based on the available clinical records; therefore, variables such as treatment duration, treatment response, and adverse drug reactions were considered only when documented in the available records. The analysis primarily focused on describing real-world prescribing patterns rather than determining the comparative effectiveness of individual antidepressants.

Result - Demographic and Clinical Characteristics

In total, 357 patients were included in the study. Females were slightly more common than males in the study. Most patients were young adults, with the 18–30-year age group forming the largest proportion, followed by those aged 31–45 years old. Based on the PHQ-9 assessment, moderately severe depression was the most frequently observed category, followed by moderate, mild, and severe depression.

Table 1. Demographic and Clinical Characteristics of Patients

Parameter	Category	n	%
Gender	Female	191	53.50
	Male	166	46.50
Age	18–30 years	136	38.10
	31–45 years	131	36.69
	46–60 years	60	16.81
	>60 years	30	8.40
PHQ-9 Severity	Mild	75	21.01
	Moderate	94	26.33
	Moderately Severe	117	32.77
	Severe	71	19.89
Total		357	100

Antidepressant Treatment Pattern

Antidepressant treatment was prescribed to most patients. Most patients received a single antidepressant, whereas a smaller proportion received two antidepressants.

Only a small number of patients were prescribed three or more antidepressants. Overall, **monotherapy was the most common approach** for managing clinical depression.

Table 2. Antidepressant Treatment Pattern

Treatment Pattern	N	%
No antidepressant	39	10.92
One antidepressant	253	70.87
Two antidepressants	62	17.37
≥3 antidepressants	3	0.84
Total	357	100

Antidepressant Utilisation Pattern

Among the prescribed antidepressants, **escitalopram was the most commonly**

used, followed by fluoxetine, paroxetine, and sertraline. Amitriptyline was used less frequently, whereas desvenlafaxine,

venlafaxine, and duloxetine were prescribed in smaller proportions. The findings show a clear preference for **SSRIs, particularly**

escitalopram, in routine clinical management of anxiety disorders.

Table 3. Pattern of Antidepressant Utilisation

Antidepressant	N	%
Escitalopram	113	31.65
Fluoxetine	81	22.69
Paroxetine	67	18.77
Sertraline	39	10.92
Amitriptyline	29	8.12
Desvenlafaxine	25	7.00
Venlafaxine	25	7.00
Duloxetine	7	1.96

Treatment According to Depression Severity

Single antidepressant therapy was commonly used across different depression severity levels. Patients with moderately severe depression comprised the largest group receiving antidepressant monotherapy.

Combination therapy was more frequently observed in patients with greater symptom severity, particularly those with severe depression. This suggests that treatment may need to be adjusted according to the patient's clinical condition.

Table 4. Treatment Pattern According to Depression Severity

PHQ-9 Severity	No Antidepressant	1 Antidepressant	2 Antidepressants	≥3 Antidepressants
Mild	5	54	16	0
Moderate	6	73	15	0
Moderately Severe	13	80	24	0
Severe	15	46	7	3

Concomitant Medication Pattern

The use of concomitant medications was common among patients. Benzodiazepines, particularly clonazepam, are frequently prescribed along with antidepressants. Analgesics, propranolol, antipsychotic

medications, vitamins, and other supportive medications were also recorded. This indicates that treatment often includes additional medicines for associated symptoms or other clinical conditions.

Table 5. Common Concomitant and Combination Therapy

Medication/Combination	n	%
Domperidone + Rabeprazole	237	66.39
Benzodiazepine-containing regimen	236	66.11
Clonazepam	196	54.90
NSAID/Analgesic-containing regimen	152	42.58
Propranolol	81	22.69
Antipsychotic-containing regimen	75	21.01
Vitamin/Supplement-containing regimen	74	20.73
Pregabalin/Gabapentin	38	10.64
Z-drug-containing regimen	25	7.00

Common Medication Combinations

The most frequently recorded combination was **domperidone and rabeprazole**. Other commonly prescribed medicines included clonazepam, betahistine, analgesic combinations, antipsychotic medications, and antidepressants. The frequent use of concomitant medicines highlights the need for appropriate medication review and rational prescribing when treating patients with clinical depression.

Discussion-

The present prospective observational study evaluated the treatment patterns of 357 patients with clinical depression. Females constituted a slightly higher proportion of the study population (53.50%) than males (46.50%). The largest age group was 18–30 years (38.10%), followed by 31–45 years (36.69%) (**Table 1**). This suggests that depression was commonly observed among young and middle-aged adults in the study population.

Moderately severe depression was the most common PHQ-9 category (32.77%), followed by moderate (26.33%), mild (21.01%), and severe depression (19.89%) (**Table 1**). Thus, a considerable proportion of patients had moderate-to-severe depressive symptoms, indicating the need

for appropriate clinical management.

Antidepressants were prescribed to 318 patients (89.08%), with monotherapy being the predominant treatment pattern. A single antidepressant was used in 70.87% of patients, while 17.37% received two antidepressants and only 0.84% received three or more (**Table 2**). **Grover et al.** reported a similar prescribing pattern in an Indian multicentric study, where the use of multiple antidepressants was relatively uncommon.¹¹

Escitalopram was the most frequently prescribed antidepressant (31.65%), followed by fluoxetine (22.69%), paroxetine (18.77%), and sertraline (10.92%) (**Table 3**). This finding is comparable with the study by **Grover et al.**, in which escitalopram was the most commonly prescribed antidepressant, followed by sertraline and fluoxetine.¹¹ Similarly, **Tripathi et al.**

reported escitalopram as the most frequently used antidepressant in their multicentre Indian study, supporting the preference for SSRIs in routine clinical practice.¹²

Treatment patterns were also evaluated according to PHQ-9 severity (**Table 4**). Single-antidepressant therapy remained the most common approach across the different severity groups. Among patients with moderately severe depression, 80 received one antidepressant and 24 received two. In

the severe group, 46 patients received one antidepressant, seven received two, and three received three or more antidepressants. **Grover et al.** also observed that antidepressant prescribing patterns could vary with clinical severity, although several patient-related and clinical factors influence treatment decisions.¹¹

Concomitant medication use was considerable in the present study (**Table 5**). Clonazepam was prescribed to 54.90% of patients, while benzodiazepine-containing regimens were identified in 66.11%. **Grover et al.** reported frequent use of benzodiazepines along with antidepressants, with clonazepam being one of the commonly prescribed agents.¹² Similarly, **Tripathi et al.** observed substantial use of concomitant sedative or hypnotic medications among patients receiving antidepressant treatment.¹² The frequent use of benzodiazepines in the present study may reflect management of associated anxiety or sleep-related symptoms, although prolonged use requires appropriate monitoring.

Other concomitant therapies included NSAID/analgesic-containing medicines (42.58%), propranolol (22.69%), antipsychotic-containing regimens (21.01%), and vitamin or supplement preparations (20.73%) (**Table 5**). **Grover et al.** also reported the use of several concomitant

medications among patients receiving psychotropic treatment, indicating that pharmacological management often extends beyond antidepressant therapy.¹¹³

The most frequently documented medication combination in the present study was **domperidone with rabeprazole (66.39%) (Table 5)**. Since these drugs are not antidepressants, their use should be considered as concomitant treatment rather than primary depression therapy. Their frequent occurrence suggests that patients may have received additional treatment for associated symptoms or other clinical conditions.

Overall, the findings are broadly consistent with previous Indian studies, particularly regarding the **predominant use of SSRIs, frequent prescription of escitalopram, preference for antidepressant monotherapy, and use of clonazepam as concomitant therapy**.¹²⁻¹⁴ These findings emphasise the importance of individualised treatment, rational prescribing, and regular review of concomitant medications. Further follow-up studies including treatment response, treatment duration, adherence, and adverse drug reactions would provide a better understanding of the effectiveness and safety of these treatment patterns.

Conclusion -

The study found that antidepressants,

especially escitalopram, were commonly used for managing clinical depression. Most patients received a single antidepressant, while clonazepam and other supportive medicines were frequently prescribed alongside treatment. Overall, prescribing patterns differed with depression severity, highlighting the importance of appropriate drug selection, individualized therapy, and regular monitoring for effective patient care.

References

1. Abritalin, E. Y., & Khabarov, I. Y. (2024). Antidepressants in psychiatric practice. *Zhurnal Nevrologii i PsikiatriiImeni S.S. Korsakova*, 124(6), 126. <https://doi.org/10.17116/jnevro2024124061126>
2. Bhat, N. P., & Preethishree, P. (2015). DEPRESSION AND ITS PHARMACOLOGICAL MANAGEMENT: A CRITICAL REVIEW. *Journal of Drug Delivery and Therapeutics*, 5(4). <https://doi.org/10.22270/jddt.v5i4.1162>
3. Fernandes, A. C., Chandran, D., Khondoker, M., Dewey, M., Shetty, H., Dutta, R., & Stewart, R. (2018). Demographic and clinical factors associated with different antidepressant treatments: a retrospective cohort study design in a UK psychiatric healthcare setting. *BMJ Open*, 8(9), e022170. <https://doi.org/10.1136/bmjopen-2018-022170>
4. Handy, A., Mangal, R., Stead, T. S., Coffee, R. L., & Ganti, L. (2022). Prevalence and Impact of Diagnosed and Undiagnosed Depression in the United States. *Cureus*, 14(8), e28011. <https://doi.org/10.7759/cureus.28011>
5. Iliev, B., & Pavlovska, I. (2021). Analysis of Clinical Features of Patients with Depressive Disorder. *Journal of Health, Medicine and Nursing*. <https://doi.org/10.7176/jhmn/92-01>
6. Jain, R., Higa, S., Keyloun, K., Park, J., Bonafede, M., Tung, A., Gillard, P., & Cutler, A. J. (2022). Treatment Patterns During Major Depressive Episodes Among Patients with Major Depressive Disorder: A Retrospective Database Analysis. *Drugs - Real World Outcomes*, 9(3), 477–486. <https://doi.org/10.1007/s40801-022-00316-4>
7. Lam, R. W. (2018). Pharmacological treatments. In *Depression* (pp. 63–84). Wiley. <https://doi.org/10.1093/med/9780198804147.003.0008>

8. Marasine, N. R., Sankhi, S., Lamichhane, R., & Dangi, N. B. (2020). Patterns of Antidepressant Prescriptions for the Treatment of Depression: A Scoping Review. In Research Square (Research Square). Research Square Platform Llc. <https://doi.org/10.21203/rs.3.rs-65197/v1>
9. Otte, C., Gold, S. M., Penninx, B. W., Pariante, C. M., Etkin, A., Fava, M., Mohr, D. C., & Schatzberg, A. F. (2016). Major depressive disorder. *Nature Reviews Disease Primers*, 2(1), 16065. <https://doi.org/10.1038/nrdp.2016.65>
10. Siegel, R., Ostermann, T., Schuster, R., & Emcke, T. (2017). Routine Data Analyses to Compare Outpatient Depression Treatment Regimens. *Studies in Health Technology and Informatics*, 243.
11. Grover S, Avasthi A, Sahoo S, et al. Prescription patterns of psychotropic medications in patients with depression: a multicentric study from India.
12. Tripathi A, Avasthi A, Desousa A, et al. Prescription pattern of antidepressants in five tertiary care psychiatric centres of India.
13. Grover S, Avasthi A, Sahoo S, et al. Correlates of prescription patterns of psychotropics in India.