

Assessment of Prescribing Pattern of Antidepressants in Patient Suffering from Depressive Disorder Visiting the OPD at a Tertiary Care Teaching Hospital

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ABSTRACT

Introduction: Depression is a prevalent condition that strongly affects the quality of life, academic performance, social behavior, family life, and workplace productivity. Treatment of depression, is of paramount importance and it can be achieved by proper and judicious use of antidepressant drugs. **Aims:** To assess drug utilization patterns of antidepressant drug & their relevant classes to understand the drug practicing behavior of antidepressant drugs. **Methods:** A descriptive cross sectional study was conducted on 159 patients visiting outpatient Department of Psychiatry at Nepalgunj Medical College Teaching Hospital after obtaining the Ethical Clearance. Patients that were eligible as per the inclusion criteria were selected for the study. All the relevant data such as demographic information, drug names, their class, route of intake was collected from the prescription card of the patient on a preformed proforma. **Results:** Total of 237 drugs were prescribed, belonging to four different classes of antidepressants to total 159 patients among which Selective Serotonin Reuptake Inhibitors (44.65%) followed by serotonin and norepinephrine reuptake inhibitors (23.27%) were most highly prescribed. Escitalopram (18.98 %) was most frequently utilized among all existing antidepressants. Antidepressant prescribed from National list of Essential Medicine (NELM), Nepal was just 34.59 % of total prescription. **Conclusion:** Selective Serotonin Reuptake Inhibitors was the commonly prescribed group of antidepressant drugs and Escitalopram was prescribed in highest number for treatment of depression. The drug prescribing habits was rationale as per WHO prescribing indicators except underutilization of antidepressant drugs from NLEM and the complete absence of Generic drug from the prescription.

Keywords: Antidepressant drugs, drug utilization, Escitalopram, Fluoxetine, SSRI, SNRI

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INTRODUCTION

Depression is a common mental health illness addressed and treated with antidepressants and other psychotropic drugs.¹ It commonly presents as significant changes in weight, modified eating habits, restlessness or sluggishness, feelings of guilt or worthlessness, decreased engagement in everyday activities, sleep disorder altered sexual drive lasting a minimum of two weeks.^{2,3} Persistent and severe depression negatively affects academic performance, social behavior, and productivity at work, leading to reduced income potential or job loss. Additionally, individuals suffering from depression face an

increased chance of death from suicide, accidents and heart conditions.⁴ The five primary Groups of antidepressants Primarily used in the treatment of depressive episodes are selective serotonin reuptake inhibitors (SSRIs), atypical antidepressants, Monoamine oxidase inhibitors (MAOIs), tricyclic antidepressants (TCAs).¹ World Health Organization defines Drug utilization studies (DUS) as the marketing, distribution, prescription, and use of medicinal products in a society, with special emphasis on the resulting medical and socioeconomic consequences.⁵ A Drug Utilization Study assists in evaluating the appropriate usage of medications, understanding the cur-

rent utilization of drugs in medical and clinical environments as well as in society. According to WHO, the appropriate use of medications involves giving patients the right drugs at the right doses, for the right amount of time, and at the lowest cost possible to them and their community.⁶ This study aims to evaluate drug Prescribing patterns of antidepressant drugs, their classes, route and their utilization from National list of Essential Medicine, Nepal (NLEM) in order to understand and promote the rational use of antidepressants in patients with depressive disorders.

METHODS

A 6-month descriptive cross-sectional study was conducted from 29 February to 2 September 2024 on 159 patient obtained after calculation of sample size in the outpatient of department of Psychiatry at Nepalgunj Medical College Teaching Hospital. Ethical Consent was obtained from the Institutional Review Committee prior to the start of the study. Patient that were eligible and selected as per the inclusion criteria and exclusion criteria for the study. Demographic information such as age and gender, antidepressant class, Antidepressant drugs name under different class, routes, name of drugs other than antidepressant was noted in a predesigned proforma.

Inclusion Criteria

1. Patients suffering from depressive disorder with no other Psychiatric illness
3. Patient of both gender (male, females)
4. Patients of age between 21 –70 years

Exclusion Criteria

1. Patients treated with only non-pharmacological approach
2. Pregnant and lactating woman
3. Patients not giving informed consent.

Statistical Analysis & Data Assessment

The data obtained from the prescription such as Age Group, Gender, drug name, drug class, route of administration was categorized and tabulated in terms of number and percentage on Microsoft excel worksheet. The final results achieved were analyzed using descriptive statistics and graphically presented via bar chart, and pie chart wherever necessary. SPSS software was used as its more user friendly and stronger tool than Microsoft Excel.

RESULTS

A total of 159 prescriptions among which total number of antidepressant prescribed were 237. Out of total 159 study population, 92(57.86%) females were observed to be suffering from depression than males 67(42.14%) as depicted in Figure 1

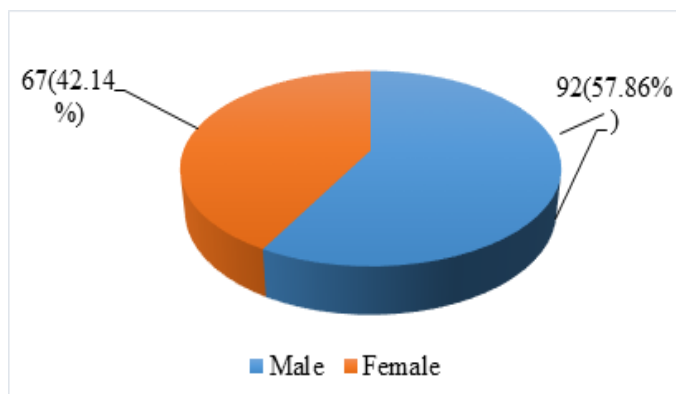


Figure 1: Distribution of Depressive Disorder as per Gender

The majority 46(28.93 %), of the patient were in age group between 41- 50 years, the highest group among the suffer depression whereas the least group affected from the disorder were 15(9.43%) in age between 31-40. Table I

S. no	Age group (Years)	Number (n)	Percentage (%)
1	21-30	33	20.75
2	31-40	15	9.43
3	41-50	46	28.93
4	51-60	26	16.35
5	61-70	39	24.52
6	Total	159	100

Table I: Distribution of Antidepressant as per the Age group n=159

Total 237 antidepressant drugs under various groups were prescribed among which Escitalopram 45(18.98%) was the highest prescribed antidepressant drug prescribed followed by venlafaxine 29 (12.23%); whereas Amitriptyline 8 (3.37%) was the least. Table II

S.N.	Drugs Name	Number (n =237)	Percentage (%)
1	Escitalopram	45	18.98
2	Venlafaxine	29	12.23
3	Sertraline	28	11.81
4	Mirtazepine	26	10.97
5	Fluoxetine	24	10.12
6	Trazadone	19	8.01
7	Duloxetine	18	7.59
8	Imipramine	15	6.329
9	Clomipramine	13	5.48
10	Paroxetine	12	5.06
11	Amitriptyline	8	3.375
	Total	237	100

Table II: Distribution of individual Antidepressant Drugs

All the antidepressant that were prescribed was administered by oral route 237(100%). Total of four groups of antidepressant were utilized for treatment; where selective serotonin reuptake inhibitors (SSRI) topped the ranked with 71(44.65%) followed by serotonin and norepinephrine reuptake inhibitors(SNRI) with 37(23.16%). Figure 2

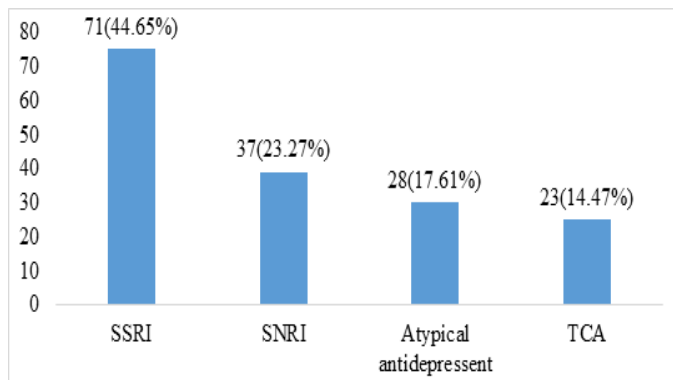


Figure 2: Distribution of Antidepressants as per their Group

Among all the prescriptions utilized for the study, only 82(34.59%) were from the National List NLEM while majority 155(65.40%) were not prescribed from NLEM. Figure 3

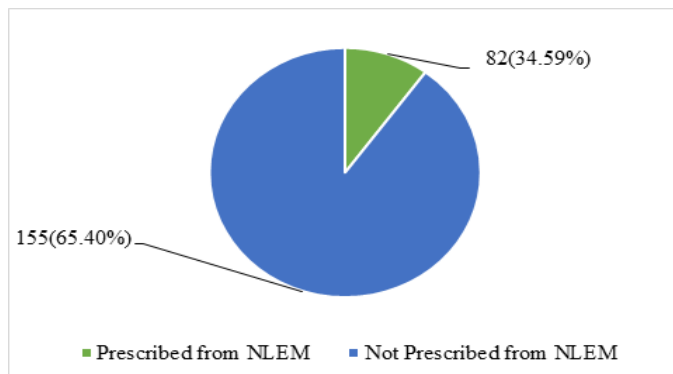


Figure 3: Antidepressant drugs prescribed as per National List of Essential Medicine (NLEM)

As per the drug prescribing indicators, all the parameters are in alignment with WHO prescribing indicators except drug from NLEM & Generic prescription. Table III

S.no.	Parameters	Result	Reference Range
1	Average no of drugs per prescription	1.5	1.6 -1.8
2	Percentage of drugs prescribed by the Generic name	0	100%
3	Percentage of encounters with an antibiotic prescribed	0	≤30%
4	Percentage of encounters with an injectable prescribed	0	<20%
5	Percentage of drugs prescribed from National Essential Drug List per prescription	34.59%	100%

Table III: Drug Prescribing Indicators & their Standard Value as per WHO

DISCUSSION

In the present study finding, more females (57.86%) were diagnosed with depression than males (42.14%), which agreed with the WHO factsheet stating: "More women are affected by depression than men".⁸ Higher prevalence of depression in female may be possibly because of hormonal difference between male and female. These alterations in hormonal regulation cause dysregulation of the stress response, which makes them more sensitive to depressive episodes. However, a similar study conducted by Mohammed et al in Kerala, India showed that prevalence was a bit higher in males (53%) than females (48%).⁹ Status which might directly or indirectly affects the development of depressive disorder. This difference could be because of geographical location as different geographical areas have different lifestyle, habits and social socioeconomic. In our study, it was evident that middle age group from 41 – 50 years (28.93% were more suffering from depressive episodes. This observation is in alignment with a survey of depression across various age group led by Laura A et al in USA which also found person from age group 40-50 to be higher than any other age group.¹⁰ Higher predominance of depression in this age group may be because of inability to cope properly with increasing economic, moral, social and family responsibility all of which are generally at their peak in this age group.

The finding in our study depicted that selective serotonin reuptake inhibitor(SSRI) represented (44.65%) was the most frequently prescribed drug group among all the antidepressant groups which is supported by a study outcome conducted Sharma KD et al Manipal Institute of Medical Sciences, Sikkim, India in 2023 where SSRI (89%) category of antidepressants was extensively utilized for treatment of depressive symptoms and disorder.⁴ Though in both the studies, selective serotonin reuptake group of antidepressants were highly prescribed but the difference between their utilization was quite huge. This higher difference between utilization of selective serotonin reuptake inhibitor group of drugs may be because of change in diagnostic criteria of depression. Diagnostic and Statistical Manual of Mental Disorders (DSM) was used by the study carried out by Sharma KD et al⁴ whereas International Classification of Disease version 10 (ICD-10) DSM was considered in our study. In addition, the sample size could also be one of the contributing reasons for such a significant change. Our study included 159 observational patients, which is considerably lower than the 316 patients in the study conducted by Sharma KD et al. The higher use of SSRIs is likely due to their better safety profile, high clinical efficacy, and wider availability. The next most utilized drug class was SNRI. So, the increased use of SSRI followed by SNRI points towards the better efficacy in treating depressive disorder. In our study, it was found that Escitalopram (18.98%) was the commonest drug utilized both under SSRI group as well as in any other group of antidepressant in our study. The finding in our study is in alignment with two similar prospective observational study led by Mehdi S et al¹ in Australia at School of Health and Biomedical Sciences in 2022 and Lam MK,¹¹ Tripathi A et al¹² in Lucknow India at King George's Medical University 2016 that revealed Escitalopram was the most frequently prescribed to the

patient for the treatment of all sorts of depression. However, Lam MK also reports use of Tricyclic Antidepressants (TCAs) in (38%) and in our study 14.47% only which is not in alignment with previous study finding.¹¹ Increased use of SSRI in all of these study is most probably because of its superior efficacy in treating symptoms of depression and practically minimal to no side effects of sedation that is seen clinically among all the antidepressant with varying degree. However, a 2009 study carried out by Indrajit B et al at Manipal College of Medical Sciences, Pokhara, Nepal showed different result where Fluoxetine (42.1%) was observed to be the most frequently used drugs in the patient suffering from depressive disorder.¹³ The predominance of fluoxetine in the study obtained by Indrajit B et al may be because of the significant time lag of 14 years as the safety & efficacy of Escitalopram was not well realized by the clinician.¹³ However, our finding is not in alignment with the WHO/INRUD (International Network for Rational Use of Drugs)¹⁴ guidelines which clearly states that 100 % drug should be prescribed by generic drug as well as from the National list of Essential Medicines as no drug was prescribed by the generic name.^{14,15} The reason of drug not being prescribed by generic name at all is because of the unavailability of Generic drugs owing to no manufacturing neither from the private or government owned pharmaceutical company. In addition, lack of any proper guidelines from the government also plays the significant role in use of generic drugs. Only handful of 34.59% drug was prescribed from NLEM of Nepal 15 which strongly deviates the prescribing guidelines suggested by the WHO.¹⁴ The strongest reason of drugs not being prescribed from NIEM by the Psychiatrist in our study is because of the absence of most antidepressant drugs that meets the mental health need of most of the populations of Nepal from the NLEM laid down by Department of drug administration (DDA) that fulfill the mental health needs of most of the general populations.

LIMITATIONS

As we conducted a descriptive cross sectional study with smaller sample size of only 159 that cannot be used to generalised antidepressant use.

CONCLUSION

The findings of our study reflects more female are suffering from depressive disorder than male, SSRI was the highest prescribed Class and Escitalopram was the maximum prescribed drug among all the Class. The drug prescribing habits was found to be rationale based on WHO drug Prescribing indicators except under prescribing of antidepressant from NLEM and complete absence of generic drugs from Clinician's Prescription.

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