

THE ANTIDEPRESSANT USAGE RATE AND TREATMENT OUTCOMES FOR OUTPATIENTS WITH DEPRESSION AT CAN THO PSYCHIATRIC HOSPITAL FROM 2022 TO 2023

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ABSTRACT

Background: Depression is a prevalent condition that affects individuals globally. It can cause significant emotional pain and hinder one's ability to perform well in various settings such as work, school, and home. Diagnosing and treating depression can be challenging due to limited resources, a shortage of trained healthcare providers, and the social stigma often attached to mental disorders. **Objectives:** The objective of this study is to identify the types and quantities of antidepressant drugs prescribed and received, as well as to assess the outcomes of treatment for depressed patients who received outpatient care at Can Tho Psychiatric Hospital between 2022 and 2023. **Materials and methods:** A descriptive cross-sectional study of 255 patients aged 18 and older was conducted at Can Tho Psychiatric Hospital in 2022-2023. Data were analyzed using SPSS 20. **Results:** Most patients (39.6%) were aged 18-29, and 76.1% were female. Patients had varying levels of depression, with the majority having moderate to severe depression. The most commonly prescribed first-line antidepressants were fluoxetine (35.3%) and sertraline (50.6%), both of which are SSRIs (Selective serotonin reuptake inhibitors). After 2 and 6 weeks of treatment, patients' depression levels significantly improved ($p < 0.001$). Remission rates increased from 29.3% ($\pm 12.4\%$) after 2 weeks to 69.9% ($\pm 17.8\%$) after 6 weeks of treatment, with a statistically significant difference ($p < 0.001$). While only the sleep disorder symptom group showed improvement after 2 weeks, all symptoms showed a high remission rate after 6 weeks of treatment. Improvement rates after 2 and 6 weeks were 8.6% and 85.9%, respectively. **Conclusions:** SSRIs are commonly prescribed as the first-line treatment for outpatients experiencing depression. Sertraline is the most frequently prescribed medication. Depression is prevalent in young women between 18 and 29, many of whom experience severe symptoms. Treatment can greatly improve all symptoms in six weeks, with sleep disturbances showing the most improvement. It is important to seek help promptly and recognize symptoms to achieve the best result.

Keywords: antidepressant; Can Tho; SSRI; HAMD-17

I. INTRODUCTION

Depression is a common mental disorder that affects millions of people worldwide. If left untreated, depression can significantly impact people's daily lives and ability to perform at work or school. In severe cases, depression can lead to suicide, which accounts for more than 1 in 100 deaths [1], [2]. Many factors contribute to the development of depression, including genetics, environmental factors, and stressful life events. Despite the complexity of depression, effective treatments are available, including psychotherapy and medication. However, access to these treatments is often limited in low- and middle-income

countries for various reasons. One such reason is a lack of resources, including financial resources and trained healthcare providers. Furthermore, social stigma and discrimination and lack of prevention and promotion interventions play a major role in preventing people from seeking treatment. As a result, the percentage of people suffering from depression continues to rise, with many either not responding well to treatment or being misdiagnosed [2],[3]. To enhance the quality of care for patients with depression, we conduct comprehensive research with the following primary goals:

1. To determine the proportion of antidepressant drugs and groups used in outpatients of depression at Can Tho Psychiatric Hospital in 2022-2023.
2. To evaluate treatment results on outpatients of depression at Can Tho Psychiatric Hospital in 2022-2023.

II. MATERIALS AND METHODS

2.1. Study population: New outpatients of depression over 18 years old were examined and treated at Can Tho Psychiatric Hospital from Oct. 2022 to Aug. 2023.

Inclusion criteria

The patient has been diagnosed with depression based on the ICD-10 criteria (code F32). The patients agreed to participate after receiving a clear explanation of the research content. The patient has been prescribed at least one antidepressant.

Exclusion criteria: During the sampling period, the patient did not complete the treatment at Can Tho Psychiatric Hospital.

2.2. Methods

Research design: A cross-sectional descriptive study.

Sampling size: We conducted our research on 255 patients, with a significant level of 5%, $Z=1,96$ for $\alpha=95\%$; $d=0.05$; $p=0.1852$ according to Ha Thanh Tu et al (2019) [4].

$$n = \frac{Z_{1-\alpha/2}^2 p(1-p)}{d^2}$$

Data collection and evaluation method: Patients were diagnosed using ICD-10 and completed the HAMD-17 scale to determine depression levels. Treatment medications are provided according to the doctor's prescription.

We analyzed and processed the results of all three-time points to evaluate treatment outcomes and changes in psychological status. At T0 (first time), we collected patients' medical history and administered the HAMD-17 scale. At T1 (after 2 weeks of medication use) and T2 (after 6 weeks), we administered the HAMD-17 scale again to track progress. The test score at the time of assessment is lower than the test score before treatment, indicating an improvement in the patient's level of depression.

The HAMD-17 scale categorizes depression levels based on total scores: 0-7 for no depression, 8-13 for mild depression, 14-18 for moderate depression, 19-22 for severe depression, and 23 or above for very severe depression.

Improvements in depression severity were assessed by comparing HAMD-17 scores before and after treatment. Symptom improvement was measured for individual categories, including mood disorders (verses 1-3), sleep disturbance (verses 4-6), movement disorders (verses 7-9), anxiety disorder (verses 10-11), somatic symptoms, and cognitive disturbances (verses 12-17). The remission rate was calculated using the following formula:

$$\text{Remission rate (\%)} = \frac{(\text{pre - treatment score} - \text{score at the time of assessment}) \times 100\%}{\text{pre - treatment score}}$$

Data analysis: STATA software version 14.2 was used to analyze the data.

Ethics approval: The Institutional Review Board at Can Tho University of Medicine and Pharmacy sanctioned the ethical approval for this study (Approval No. 22.208.HV/PCT-HĐĐĐ, dated August 08, 2022).

III. RESULTS

3.1. Medications used in the treatment of depression

Table 1. General characteristics of participants

Characteristics		Frequency (n=255)	Percentage (%)
Age group	18-29	101	39.6
	30-39	49	1.2
	40-49	42	16.5
	50-59	35	13.7
	≥ 60	28	11.0
Gender	Male	61	23.9
	Female	194	76.1

The study patients had an average age of 37.6 (±15.5), with the oldest subject being 77 years old and the youngest being 18 years old. The majority of patients (39.6%) were between the ages of 18-29. The study consisted mostly of female patients (76.1%). Only 29.5% of the patients had a body mass index of 23 or higher.

Table 2. Depression rate among patients in the study

Level of depression	Frequency (n=255)	Percentage (%)
No depression	0	0.0
Mild depression	5	2
Moderate depression	90	35.3
Severe depression	82	32.2
Very severe depression	78	30.5

Overall, patients' depression levels were distributed as follows: 35.3% had moderate depression, 32.3% had severe depression, and 30.5% had very severe depression.

Table 3. Antidepressant medications used in treatment

Drug group	Name	Dose (mg/day)	Frequency (n)	Percentage* (%)	Accumulated Percentage** (%)
TCA	Amitriptyline	25-300	13	5.1	13.7
	Tianeptine	37.5	22	8.7	
SSRI	Escitalopram	5-20	11	4.3	85.5
	Fluoxetine	10-60	91	35.8	
	Sertraline	25-200	117	46.1	
SARIs	Trazodone	150-300	2	0.8	0.8
Total	255		-	100.0	

(*): Independent calculation used 255 patients.

(**): Calculation based on 271 anti-depressant prescriptions.

Fluoxetine and sertraline were the two most frequently prescribed antidepressants for initial treatment (35.3% and 50.6%, respectively). The group of drugs preferred for treating depression are SSRIs, accounting for 85.61% of the prescriptions.

3.2. Treatment outcome

Table 4. Total HAMD-17 scores after treatment

	At initial time (T0)	After 2 weeks (T1)	After 6 weeks (T2)	p
HAMD-17 scores ($\bar{x}\pm SD$)	20.3 \pm 4.4	14.4 \pm 3.8	6.3 \pm 4.2	<0.001

(*): Repeated Measures ANOVA

After 2 weeks and 6 weeks of treatment, there was a statistically significant difference (p<0.001) in the change of the patient's depression level compared to the beginning of treatment.

Table 5. The remission rate on the HAM-D 17 scale and remission rates after 2 and 6 weeks.

		After 2 weeks (T1)	After 6 weeks (T2)	SD	OR (95% CI)	p
Overall remission rate (%) ($\bar{x}\pm SD$)		29.3 \pm 12.4	69.9 \pm 17.8	40.6 \pm 15.8	38.6-42.5	<0.001
Psychomotor agitation	255	24.8 \pm 24.2	62.9 \pm 31.4	38.1 \pm 31.8	34.2-42.0	<0.001
Sleep disturbance	255	44.1 \pm 23.9	83.4 \pm 24.5	39.3 \pm 29.0	35.7-42.9	<0.001
Motor retardation	255	20.9 \pm 19.1	62.8 \pm 23.5	41.9 \pm 21.7	39.2-44.5	<0.001
Anxiety symptoms	255	19.7 \pm 27.3	53.7 \pm 30.04	34.03 \pm 30.2	30.3-37.8	<0.001
Somatic symptoms and cognitive disturbance	255	26.9 \pm 31.03	82.6 \pm 27.1	55.7 \pm 34.7	51.4-59.9	<0.001

After two weeks of treatment, the remission rate was 29.3% (\pm 12.4%), which increased to 69.9% (\pm 17.8%) after six weeks of treatment. The difference in remission rates between the two periods was statistically significant (p<0.001) with an average difference of 40.6% (95% CI: 38.6-42.5). On the HAM-D17 scale, only the sleep disorder symptom group showed improvement after two weeks, while the other symptoms remained mostly unchanged. However, after six weeks of treatment, all symptoms showed a high remission rate. The difference in the remission rate of symptom groups after six weeks compared to after two weeks was statistically significant with p<0.001 across all five symptom groups.

Table 6. Assessment of improvement in depression symptoms after 2 weeks and 6 weeks.

After 2 weeks (T1)	After 6 weeks (T2)		χ^2 p*
	Improvement	Not improvement	
Improvement	22 (8.6)	0 (0.0)	196.01
Not improvement	197 (77.3)	36 (14.1)	<0.001

(*): McNemar's test

The rate of improvement in the depression level of patients was 8.6% after 2 weeks and 85.9% after 6 weeks, respectively.

IV. DISCUSSION

4.1. Medications used in the treatment of depression

Based on the findings of the research, aged 18-29 (39.6%) are the most susceptible to depression, which is consistent with the findings of Tran Thi Thuy Nga (2020), the highest proportion of depression is found in the age group 16-45 (44.8%) [5]. Another study by

Nguyen Van Thong and colleagues at Can Tho Psychiatric Hospital in 2018 also indicated that individuals aged 25-44 had the highest incidence of depression [6]. We think this might be because of major life changes, like moving away from family, adapting to new learning and working environments, making new connections, and not having enough strategies to deal with it. As a result, rates of depression are increasing in this demographic.

According to a study of 255 patients, women had a rate of depression three times higher than men (76.1%). This rate is similar to previous studies conducted by Tran Thi Thuy Nga (2020) with 62.3% female patients and Nguyen Thanh Hai (2018) with 61.5% female patients [5], [7]. Research conducted by author Nguyen Van Thong (2018) at the same study site five years ago also showed a higher rate of depression in women than men. These findings suggest that Vietnamese women face significant life pressure [6].

Our study found that the majority of patients fall into the category of moderate to very severe depression, with only a small percentage experiencing mild depression. Based on author Nguyen Thanh Hai's (2018) studies, it appears that the incidence rate of major depression among patients is relatively low, at 16.9% [5]. Additionally, Nguyen Van Thong's (2018) research indicates that the average rate of depression is the highest. The prolonged duration of the COVID-19 pandemic may have contributed to the increase in both the prevalence and severity of depression [6].

Based on 255 patient prescriptions, it was found that SSRIs were the most commonly used treatment option (85.61%), with sertraline and fluoxetine being the top two choices at 50.6% and 35.3%, respectively. This finding aligns with previous Tran Thi Thuy Nga (2020) and Nguyen Thanh Hai (2018) studies. Prioritizing the use of SSRIs is consistent with Vietnam's Ministry of Health treatment guidelines, as this drug group has high tolerability and low incidence of side effects [5], [7], [8], [9], [10].

4.2. Treatment outcome

As discussed above, the appropriate use of the medication resulted in an increase in remission rates for patients on the HAMD-17 scale after 2 weeks (29.3 ± 12.4) and 6 weeks (69.9 ± 17.8), compared to the initial time. These increases were statistically significant ($p < 0.001$). The patient's general condition improved after 2 weeks, with sleep disturbance showing the greatest improvement among the symptom groups. However, some symptom groups demonstrated minimal improvement or worsened. Nevertheless, after 6 weeks of treatment, all symptom groups showed significant improvement and were statistically significant ($p < 0.001$). Notably, sleep disorders remained the group of symptoms with the most considerable improvement during the study period. This outcome is consistent with the study by Nguyen Thanh Hai (2018), which found that the appropriate use of the medication as recommended can positively affect patients, with a total HAMD-17 score improvement after 2 weeks. However, the drug's effects were most noticeable after 6 weeks, indicating that patients should continue the treatment according to the regimen.

V. CONCLUSION

Depression is becoming more common among younger age groups, particularly those aged 18-29 years, with women being the majority of those affected. SSRIs are commonly used as the first-line treatment for outpatients with depression. Sertraline is the medication that is prescribed most often for this condition. Treatment has been shown to significantly improve all symptoms within a six-week timeframe, with sleep disturbances

demonstrating the most notable improvement. It is crucial to continue studying and researching depression to better understand its causes and develop more effective treatments. Moreover, it is essential to raise awareness of depression symptoms and encourage individuals to seek help early for the best possible outcome.

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