

## THE VALUE OF USING A MEASURING SCALE IN ASSESSING THE SEVERITY AND OUTCOME OF DEPRESSION

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### ABSTRACT

**Background:** High prevalence of depression are reported in Iraq. Selective serotonin inhibitors are the most often prescribed antidepressant. Publishing on selective serotonin reuptake inhibitors in management of depression is scarce in Iraq which was the impetus to carry out reporting on personal experience with selective serotonin reuptake inhibitors. **Methods:** A total of 52 patients with major depressive disorder was included in this study for the period 1<sup>st</sup> Oct. 2019 to 1<sup>st</sup> May 2020. Their age was 19 – 59 years with male to female ratio of 0.3:1. Hamilton depressive scale 17 was used categories depression in mild, moderate and severe. Demographic variables were of interest. **Results:** Before treatment, there were 17%, 30.8% and 61.5% of mild, moderate and severe depression, respectively. After treatment the degrees of depression were 67.3%, 19.2% and 13.5%, respectively. There was a significant increase in mild depression and a significant decrease in moderate and severe depression. ( $p=0.00001$ ). Of those improved patients 35.9% aged < 40 years and 38.5% aged  $\geq$  40 years. No significant role for age in improvement ( $p=0.8$ ). The improved males and females were 41.7% and 38.9%, respectively. Sex was not significantly affecting the outcome ( $p=0.3$ ). Improve married women and others (divorce, widows, ... etc.) were 36% and 37%, respectively. Marriage was playing no role in improvement ( $p=0.4$ ). Out of those with  $\leq$  secondary and > secondary levels 42.8% and 44.4% were improved, respectively. No significant role for education level ( $p=0.5$ ). **Conclusion:** Selective serotonin inhibitors are effective in management of major depressive disorder.

**KEYWORDS:** SSRI, major depressive disorder, Iraq.

### INTRODUCTION

Mood disorders rank among the top ten causes of world disability and the major depressive disorder appears first on the list.<sup>[1]</sup> Incorporation of the DSM nomenclature<sup>[2]</sup> after introductions of operationalized diagnostic criteria for mental disorders in the late 1970s<sup>[3]</sup> represented a development for the field of psychiatric epidemiology. Mental health researchers were able to undertake, Over the 34-year period since the publication of DSM-III, a large body of psychiatric epidemiological research has accumulated with studies under- taken across multiple countries. High prevalence of depression was reported in Iraq.<sup>[4,5]</sup>

Selective serotonin reuptake inhibitors (SSRIs) are the most often prescribed substance class of antidepressants.<sup>[6]</sup> Their efficacy could be shown in a large number of randomized, placebo-controlled clinical trials (RCTs)<sup>[7]</sup> and compared with the first generation of antidepressant agents such as the tricyclics and tetracyclics, and they are generally better tolerated. However, there is still uncertainty regarding a potential dose-response relationship of these compounds. Publishing on SSRIs among depression is scarce in Iraq which was an impetus to carry out this work.

This study was carried out to report a personal experience with SSRIs in treating depression.

## MATERIALS AND METHODS

A total of 52 patients with major depressive disorder (MDD) was included in the study for the period 1<sup>st</sup> Oct. 2019 to 1<sup>st</sup> May 2020. Their age was ranged 19 to 59 years with a male to female ratio of 0.3:1. All patients were attending the psychiatric consultancy clinic in Al-Noman Teaching Hospital, Baghdad, each Thursday during the study period (convenient sample).

The requested information was demographic data and responses to 17 items of Hamilton depression scale (HAM-D<sub>17</sub>).<sup>[8]</sup> Variables on HAM-D<sub>17</sub> were with Likert scale. Score of  $\leq 7$ , 8-12, 13-20 and  $> 20$  indicating normal, mild, moderate and sever grades, respectively.

An interview with each patient and HAM-D<sub>17</sub> was filled on start of study and 8 weeks later after treatment with SSRI.

Chi square was used to examine the impact of SSRI on the severity of MDD (categories of HAM-D<sub>17</sub> score).  $P < 0.05$  was considered of significant.

## RESULTS

Before starting treatment with SSRIs there were 4 (7.7%), 16 (30.8%) and 32 (61.5%) in mild, moderate and sever categories. Thirty-five (67.5%) patients, 10 (19.2%) patients and 7 (13.5%) patients were in mild, moderate and sever categories after treatment.

**Table 1: Grade of MDD distribution before and after treatment with SSRI.**

Time of assessment	Grade of MDD					
	Mild		Moderate		Sever	
	No.	%	No.	%	No.	%
Before treatment	4	7.7	16	30.8	32	61.5
After treatment	35	67.3	10	19.2	7	13.5

$\chi^2 = 42.1$ , d.f.=2,  $p = 0.00001$

Patients with mild MDD were increased after treatment, those with moderate and sever MDD were decreased. The changes in frequency of mild, moderate and sever categories were statistically significant. ( $\chi^2 = 42.1$ , d.f.=2,  $p = 0.00001$ ). These findings are shown in Table 1.

Fourteen (35.9%) patients and 5 (38.5%) of those  $< 40$  and  $\geq 40$  years, respectively, were improved after treatment with SSRI. Age was not significantly affected outcome of SSRIs ( $p = 0.8$ ).

Out of males and females, 5 (41.7%) and 14 (38.9%), respectively, improved on SSRIs treatment. No significant difference in improvement between males and females ( $p = 0.3$ ).

Nine (36%) of married women and 10 (37%) of single, widow, divorced ...etc women were showing improvement on treatment with SSRIs. Social status was not significantly affecting the outcome of SSRIs ( $p = 0.4$ ).

Out of those with less or equal secondary education level, 15 (42.8%) and out of those with higher educational level 44.4% reported improvement on SSRIs. Education level was not significantly affecting the outcome of SSRIs ( $p = 0.5$ ).

Fifteen (35.7%) patients with positive family history of MDD and 4 (40%) with negative family history were showing improvement by SSRIs treatment. No significant for positive family history in modifying outcome of SSRIs treatment.

These findings are shown in Table 2.

**Table 2: distribution of factors might affect outcome of treatment.**

variable	Total	After treatment with SSRI		P value
		No.	%	
Age				
$< 40$	39	14	35.9	0.8
$\geq 40$	13	5	38.5	
Sex				
Male	12	5	41.7	0.3
Female	36	14	38.9	
Social status				
Married	25	9	36	0.4
Single, widowed, ...etc.	27	10	37	
Education				
$\leq$ secondary	43	15	42.8	0.5
$>$ secondary	9	4	44.4	
Family history				
positive	42	15	35.7	0.6

Negative	10	4	40	
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## DISCUSSION

To date, there are no published randomized clinical trials involving direct comparisons of several antidepressants from the same or different classes to detect small but clinically meaningful differences.

A significant change in the rates of MDD categories, and the prominent one in mild MDD (increase from 7.7% before treatment to 67.3% after treatment) was observed. This finding might be explained by efficacy of SSRI. Arroll et al<sup>[9]</sup> in their meta-analysis study documented that short duration of treatment (6-8 weeks) showed improvement among patients with MDD. Several articles showed that SSRIs are effective in improvement of MDD defined as sever (by a measure of depressive state i.e., HAM-D<sub>17</sub>) to mild one.<sup>[9,10]</sup>

In this study, 25% of patients were > 40 years of age (no patient was age  $\geq$  60 years). Aged people experience changes in pharmacokinetics (drug absorption, distribution, metabolization, and elimination), and pharmacodynamics (effect of drug on the body), creating higher risk for adverse drug effects. Of the antidepressant drug classes, SSRIs are the most well tolerated, cause the least number of side effects, and they are the safest and first choice among anti-depressants. They are commonly prescribed to help combat depression and some forms of anxiety in older adults. Home care clinicians or family physicians play a critical role in medication management, assessing patient knowledge of, adherence to, and responses to medications.

Demographic elements (age, sex, social status, education level and family history) were not significantly affecting the outcome of treatment with SSRIs ( $p = 0.8, 0.3, 0.4, 0.5$  and  $0.6$ , respectively). This finding might be explained by SSRIs as they are the most tolerated causing the least side effects and called the safest and the first choice among antidepressants. Depression has been linked in part to depleted concentrations of the neurotransmitter's serotonin, norepinephrine, and dopamine. Drugs such as the SSRIs that affect serotonin in the body are considered serotonergic. Serotonin is present in the brain, platelets, and gastrointestinal tract, but the exact mechanism by which serotonergic drugs work is not yet fully understood. SSRIs act by inhibiting serotonin transporter, which inhibits serotonin reuptake, thereby increasing the availability of serotonin to receptors in synapses. Such mechanism is not affecting by demographic factors.

## CONCLUSION

SSRIs are effective in management of MDD among Iraq depressive patients.

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