

# Review of the Knowledge on Selective Serotonin Reuptake Inhibitors (SSRIs) for Depression Management by Resident and Intern Physicians of the Medical Clinic of 5 Hospitals in CABA

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## ABSTRACT

**Introduction:** depression is an increasingly common disorder around the world. General practitioners are the most frequently consulted health professionals by depressed patients. More than 70% of all depressed patients receive treatment by general practitioners and not by psychiatric specialists. According to studies conducted in Buenos Aires, more than 25% of all patients admitted to the Clinical Services in public hospitals present depression. These patients are usually under the care and follow-up of clinical trainee physicians, residents, or interns.

This study aimed to analyze the knowledge about selective serotonin reuptake inhibitors (SSRIs) of clinical trainee residents and interns in five hospitals in the Ciudad Autónoma de Buenos Aires (CABA) and to describe their treatment of a depressive patient.

**Material and methods:** we conducted a descriptive cross-sectional study with a non-probabilistic sampling. We used a semi-structured questionnaire arranged into two sections as a measuring tool. One, with demographic data to describe the sample. The other, with 15 items, explores respondents' knowledge of SSRIs and the treatment of depression. Four experts reviewed the questionnaire, which was anonymous. We applied it to 59 clinical medical trainees, residents, and interns from five CABA hospitals who volunteered to participate during August-September 2022.

**Results:** most clinical trainees do not treat depressive conditions and, when confronted with a depressed patient, request an assessment by a Mental Health specialist. Only 6.8% medicate the patient with an antidepressant. More than 75% of the sample reported remembering their knowledge of SSRIs from the Pharmacology course and 13.6% from the Psychiatry course at the School of Medicine.

**Conclusion:** there is a deficient knowledge about SSRIs in trainee residents and interns of Clínica Médica. We believe it is necessary to reinforce training on depression and management of antidepressants during residency/internship practice in Clínica Médica.

**Key words:** SSRIs, knowledge, resident physician, intern physician, Clínica Médica.

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## INTRODUCTION

Before the onset of the COVID-19 pandemic, the Pan American Health Organization (PAHO) had already described affective disorders as an epidemic in our American continent<sup>1</sup>. In turn, according to the epidemiological study conducted by Stagnaro et al.<sup>2</sup>, major depressive disorder is the one with the highest lifetime prevalence in Argentina (8.7%), among other mental health diseases. According to the literature, 20-30% of patients presenting for primary care consultation suffer from depressive symptoms<sup>1</sup>. Estimates indicate that depression is the third leading cause of medical consultation in general hospital care services<sup>3,4</sup>. More than 70% of patients with depression are seen by general practitioners and not by specialists in psychiatry<sup>3</sup>. In turn, the uneven distribution and shortage of psychiatrists mean that there is insufficient coverage of the increased demand for Mental Health services and that it is up to first-contact or first-level-of-care physicians to attend to a considerable proportion of patients with depressive disorders<sup>5</sup>. On the other hand, Yanzón de la Torre et al.<sup>6</sup> report that more than a quarter of the patients admitted to Medical Clinic Services in general hospitals in Buenos Aires suffer from depression. Patients admitted to the Medical Clinic Services are usually attended to and followed by physicians in training, either residents or interns in the Medical Clinic. Allen Frances<sup>7</sup> reported that primary care physicians in the United States prescribe most psychotropic drugs; they write 90% of the prescriptions for anxiolytics and 90% for antidepressants. In the United Kingdom, antidepressant prescribing has doubled in the last ten years<sup>8</sup>.

The choice of drug for a depressive disorder depends on the tolerability profile of its side effects and safety. These two factors make the new generation of antidepressants the first choice. The most widely used are the selective serotonin reuptake inhibitors (SSRIs) (fluoxetine, sertraline, paroxetine, fluvoxamine, citalopram, and escitalopram)<sup>9</sup>. Stahl<sup>10</sup> states that few drugs have transformed the field of clinical pharmacology as drastically as SSRIs. As methodological background, the work of García Iza and Soto Ubillus<sup>11</sup> stands out, who studied the knowledge of psychopharmacological prescription among non-psychiatrists in Peru. These researchers conclude that knowledge was generally deficient and that further training programs in psychopharmacology are necessary to improve such knowledge. In turn, Agreda Carrillo et al.<sup>12</sup> analyzed the level of knowledge and practices on depression in resident physicians of different specialties in Lima, Peru. There, they classify the level of knowledge according to percentiles as sufficient, moderate, and insufficient, according to whether it is above the 75th percentile, between the 50th and 75th percentile, or below the 50th percentile, respectively. These authors conclude that the knowledge of depression in the physicians evaluated is not optimal.

## OBJECTIVES

- To analyze the knowledge of selective serotonin reuptake inhibitors (SSRIs) by resident and intern physicians of the Medical Clinic of 5 CABA hospitals.
- To analyze the treatment of depressed patients by resident and intern physicians of the Medical Clinic of 5 hospitals in CABA.

## MATERIAL AND METHOD

We conducted a descriptive cross-sectional study with non-probabilistic sampling. We used a semi-structured questionnaire organized into two sections as a measurement instrument: one, with demographic data to characterize the sample and their professional practice; the other, with 15 items, explores the knowledge of SSRIs and the management of depression by medical professionals. Four experts reviewed the questionnaire. The instrument is anonymous and was administered to 59 physicians in training in clinical medicine (residents and concurrent) from 5 hospitals in CABA, who participated voluntarily. The sample was taken in person, virtually, or both, having previously discussed and explained the project with all participants from August to September 2022. We obtained a 20% response rate from all five hospitals.

## RESULTS AND DISCUSSION

The demographics of the sample (N = 59) of medical professionals surveyed appear in Table 1. 69.5% of the sample was female, while 30.5% was male. This demographic data reflects the current health professionals in our country, Argentina, where 70% or more are female. Of the 59 medical professionals, 55 were residents, and 4 were interns. The low proportion of concurrent physicians compared to residents in the sample could be due to the decrease in the supply of internship vacancies concerning residencies in recent years in CABA hospital.

To analyze the questions on knowledge, we took into account the percentages in Table 2. The most important results of the second part of the instrument applied are as follows: - Of the total sample, in the event of attending a patient deemed to be going through a depressive episode, 93.2% referred him/her to a Psychiatry specialist, while 6.8% medicated him/her.

When asked in what clinical situations an SSRI prescription is not advisable, 67.8% answered correctly (the option "anguish and crying in the context of grief"), 28.8% said they did not know the answer, and 3.4% answered incorrectly. For this question, we observed a moderate level of knowledge. The most frequent clinical indications for SSRIs include, in addition to major depressive disorder, anxiety disorders, post-traumatic stress disorder, obsessive-compulsive disorder, and eating disorders<sup>10</sup>.

**Tabla 1.** Sample demographic data (N = 59)

Age (years)		
Median/standard deviation		29.5 ± 3.06
Range		25-37
	Argentina's Public University	86.4%
	Argentina's Public University	5.1%
	Argentina's Private Univewrsity	6.8%
	Foreign Public University	1.7%
Postgraduate training year	1st. year of residency	39%
	2nd year of residency	16.9%
	3rd year of residency	13.6%
	4th year of residency	16.9
	Chief residents	6.8%
	1st year internship	0
	2nd year internship	0
	3rd year internship	1.7%
	4th year internship	0
	5th year internship	5.1%

**Tabla 2.** Classification of level of knowledge according to response percentages

Percentages of correct responses (%)	Knowledge level clasificacion
More than 75	Sufficient knowledge
From 50 to 75	Moderate knowledge
Less than 50	Insufficient knowledge

Adapted from Agreda-Carrillo E et als., 2017

When asked which of the SSRIs mentioned is not suitable for use in a polymedicated 75-year-old patient, only 28.8% gave a correct answer (fluoxetine), while 57.6% did not know this. The remaining 13.6% answered incorrectly, choosing the options of citalopram (3.4%), escitalopram (1.7%), and sertraline (8.5%). About this question, we noticed insufficient knowledge. Fluoxetine is a potent inhibitor of cytochromes P450 3A4 and 2D6, responsible for the metabolism of multiple drugs, and as a result, it can increase plasma levels and the effects of other drugs<sup>1</sup>. In response to the question about the length of treatment recommended for a first depressive episode, 50.8% answered correctly (between 12 and 18 months), while 42.4% said they did not know. 5.1% responded that they would continue the antidepressant treatment until they had a clinical assessment that the patient is in good spirits, and only the remaining 1.7% until the patient reports feeling well. There was moderate knowledge about the question on the recommended treatment time.

Regarding the clinical situations in which it is not advisable to prescribe paroxetine in monotherapy, 74.6% answered "I do not know," and only 16.9% responded correctly to the option of acute bipolar depression. Therefore, there is insufficient knowledge regarding the contraindication of indicating an SSRI in monotherapy in acute bipolar depression. According to the literature, in acute bipolar depression, the use of SSRIs as monotherapy is not indicated<sup>13</sup>.

- About the latency time to wait for a response to the indication of an antidepressant, as shown in Figure 1, 74.6% answered correctly ("2 to 3 weeks"), while 20.3% reported not knowing. Sufficient knowledge is observed concerning the latency time of SSRIs. Antidepressants have a latency time for their clinical response of 2 to 3 weeks or more<sup>9</sup>.

When asked whether SSRI antidepressants can generate dependence and hence, withdrawal, only 27.1% answered "YES"; 44.1% answered "NO", and the remaining

28.8% opted for the answer “I do not know” (Fig. 2). Nielsen et al. in 2012 compared withdrawal symptoms and dependence to benzodiazepines and SSRIs. They mention that - although dependence associated with benzodiazepines is classically described - for SSRIs, it is not described per se. However, given the large percentage of patients showing withdrawal symptoms when trying to discontinue them, it should be considered a clinical situation of dependence<sup>14</sup>.

When asked if they have had training in antidepressant management and approach to depression during their residence/internship training, 96.6% of the respondents answered “NO,” and only 3.4% answered “YES,” as shown in Figure 3.

98.3% (n = 58) of the respondents considered that it is necessary to receive education and training on issues related to depression and antidepressants, while 1.7% (only 1 out of the 59 respondents) said “NO.” In the case of answering “NO,” the selected justification was “Because it is information that should be handled only by the specialist” and “If I suspect a depressive condition, I immediately refer him/her to a specialist.”

When asked about where they remember having obtained their knowledge of SSRIs, 76.3% (n = 45) answered from the Pharmacology course in Medical School, 13.6% (n = 8) from the Psychiatry course in Medical School, 3.4% (n = 2) from residency/concurrency and 1.7% (n = 1) from extracurricular courses (Fig. 4). Among the limitations of this study, it should be noted that, since this was a non-probabilistic sampling and a relatively small sample, the results cannot extrapolate to the entire population.

**CONCLUSIONS**

- Even though, according to the literature, at least a quarter of the patients admitted to the medical clinic present depression, the majority of physicians in training

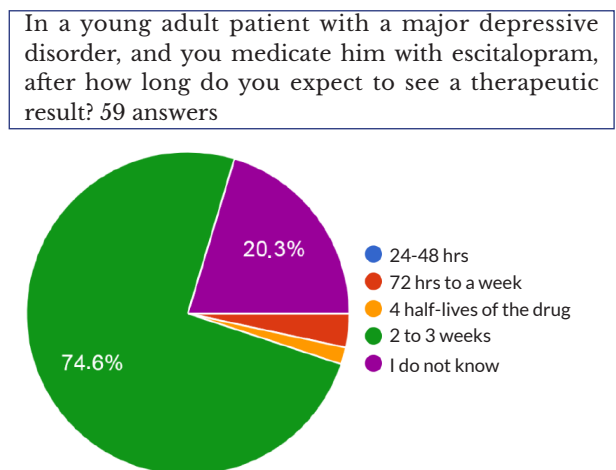


Figure 1. Knowledge about the latency of action of SSRIs.

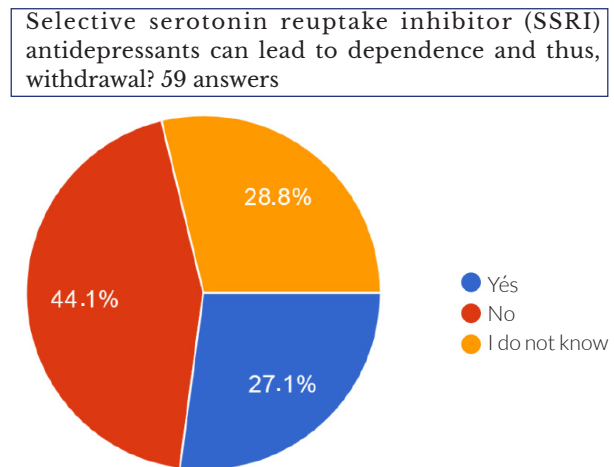


Figure 2. Knowledge about SSRI dependence.

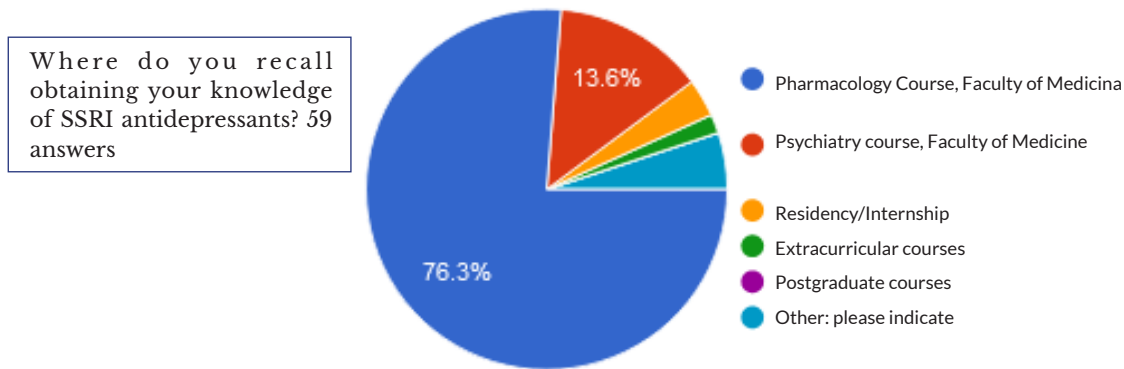


Figure 3. Antidepressant and approach to depression training in Medical Clinic education

in the medical clinic (98.2%) do not treat depressive symptoms, but rather, when faced with a depressed patient, request evaluation by a mental health specialist. Only 6.8% medicate with an antidepressant.

- As in other studies in the literature on the approach to depression by non-psychiatrist physicians, insufficient knowledge is observed not only about the approach to depression but, above all, about SSRIs in resident and intern physicians in medical clinics.

- More than 75% of the respondents recalled having obtained their knowledge about SSRIs in the Pharmacology course and 13.6% in the Psychiatry course of the Medical career. Thus, we conclude that it is necessary to optimize the teaching of this subject during the undergraduate course by adjusting the curriculum.



**Figure 4.** Training sources in antidepressant management.

- We observed insufficient knowledge in the questions related to the indications, possible pharmacological interactions, and counter-indications of SSRIs, probably for not being topics usually addressed in the undergraduate course at the School. However, most respondents answered correctly about the latency of action, a fact frequently emphasized in the Pharmacology course.

- Most do not consider or are unaware of the possibility of generating dependence and, consequently, the withdrawal syndrome associated with all antidepressants, particularly SSRIs.

- According to the results of the present study, it seems valid to optimize the undergraduate curriculum and also the postgraduate curriculum for training on depression and antidepressant management in the residency/concurrent Medical Clinic.

**Conflict of interest:** the authors declare no conflict of interest.

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