

Self-medication with anxiolytics and antidepressants: main risk factors and repercussions

Automedicación con ansiolíticos y antidepresivos: principales factores de riesgo y repercusiones

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Abstract:

Self-medication refers to the consumption of medications on one's own initiative and without a prescription from a health professional to treat self-diagnosed problems or by an individual who is not medically qualified. Self-medication is a common practice in the world and is generally practiced in both developed and developing countries, with a prevalence ranging between 12.1% and 92.8%, respectively. The aim of this article is to provide information on self-medication with antidepressants and anxiolytics, the consequences that the different groups of drugs bring with them when not properly implemented, the factors that influence the decision making to carry out this practice, so that the general population and especially health professionals, both those who are in training and those who have already graduated, be aware of the risks with this type of medication, identify and act in a timely manner in the event of intoxication, providing patient education on the proper use of them, and positively influence the population to have a positive impact on the statistics., avoiding morbimortality, without leaving out the promotion of mental health, by recognizing the risk factors and taking actions for a timely intervention on the risk groups.

Keywords:

Self-medication, antidepressants, anxiolytics, consequences, risk factors

Resumen:

Automedicación se refiere al consumo de medicamentos por iniciativa propia y sin prescripción de un profesional de la salud para tratar problemas autodiagnosticados o por algún individuo que no está medicamente calificado. La automedicación es una práctica común en el mundo, es realizada de manera general tanto en países desarrollados como en vías de desarrollo, tiene una prevalencia que oscila entre 12.1% y 92.8% respectivamente. El objetivo del presente artículo es dar a conocer información sobre la automedicación con antidepresivos y ansiolíticos, las consecuencias que los diferentes grupos de fármacos traen consigo al no tener una buena implementación, los factores que influyen en la toma de decisiones para llevar a cabo esta práctica, con el fin de que la población en general y en especial los profesionales de la salud, tanto los que se encuentran en formación como los que ya han egresado, tomen conciencia de los riesgos con este tipo de medicamentos, identifiquen y actúen de manera oportuna ante una intoxicación, brindar educación al paciente sobre un buen uso de los mismos, e influyan positivamente en la población para tener un impacto positivo en las estadísticas, evitando la morbimortalidad, sin dejar fuera la promoción de la salud mental, al reconocer los factores de riesgo y tomar acciones para una intervención oportuna sobre los grupos de riesgo.

Palabras Clave:

Automedicación, antidepresivos, ansiolíticos, consecuencias, factores de riesgo

INTRODUCTION

The practice of self-medication is understood as the consumption of medicines on one's own initiative and without a prescription from a health professional, to treat self-diagnosed problems or by an individual who is not medically qualified.¹⁻³

This practice is becoming more frequent and is considered a severe public health problem, not only in developed countries but also in developing countries, as the ease of purchase increases the problem, combined with the lack of the habit of self-care.^{1,4}

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Received: 04/05/2023, Accepted: 13/07/2023, Postprint: 20/10/2023, Published: 05/01/2024

The use of a drug should be safe and effective, for which the consumer should identify the symptoms, therapeutic objectives, dosage and temporality of use of the drug, as well as be clear about the contraindications, comorbidities and adverse effects. The omission of this information leads to irrational and incorrect use of drugs, resulting in late or wrong diagnosis, wrong choice of treatment, inadequate dosage or administration, poor drug interaction, adverse reactions, drug resistance, development of comorbidities and, in severe cases, death.^{1, 2, 4-6}

Currently, concepts have been established to differentiate between responsible self-medication and inappropriate self-medication, the former refers to the consumption of over-the-counter drugs according to the instructions for use indicated on the package or the correct use of drugs approved by a medical professional, in order to involve the patient in their treatment. While inappropriate self-medication refers to the consumption of a medication that was not recommended by a health professional, that was used for a different purpose, sharing medication with a family member or friend or using medication with expired expiration date.²

EPIDEMIOLOGY

Self-medication is a common practice in the world, and is widely practiced in both developed and developing countries, the prevalence ranging from 12.1% to 92.8%, respectively. The types, extent and motives may differ from one country to another, as well as the effects on society.^{3, 5}

Mental disorders such as anxiety and depression are among the top ten leading causes of years lived with disability in the 10-49 age group worldwide. Health systems in most countries have not responded well to the situation due to the lack of equity between the need for treatment and its availability.⁷

Currently, there are no studies focused on global pharmacovigilance to compare the consumption of psychotropic drugs at the country level. There are few international comparison studies, which have the limitation of focusing on a single type of psychotropic drug.⁷

Worldwide consumption of psychotropic medications increased from 28.54 defined daily doses or DDD (amount of drug a typical adult patient receives per day as treatment) per 1,000 population in 2008 to 34.77 DDD per 1,000 population in 2019 globally, which translates to a relative increase of 4.08% each year.⁷

The increase in DDD in the consumption of psychotropic drugs has been seen mainly in antidepressants with an increase of 3.50%, followed by antipsychotics with a 2.49% increase. Observing decreases in tranquilizers and sedatives and hypnotics of 0.99% and 0.91%, respectively.⁷

In 2019, the consumption of psychotropic drugs was higher in high-income countries, having a DDD of 123.61, followed by 13.52 and 6.77 DDD in upper-middle and low-income countries, respectively. Portugal was the country with the highest sales of these drugs, ahead of Belgium, Spain, Sweden and the United States.⁷

ANXIETY AND DEPRESSION

Mood has been defined as an integrative and sustained affective state that the individual endures internally, exerts a pervasive effect on the person's behavior, fluctuating slowly by feedback effect with social interactions and the environment, impacting on the majority of behavioral aspects.^{8, 9}

Disorders of mood or affective disorders are a group of psychiatric conditions characterized by a feeling of loss of control over mood, resulting in generalized discomfort, negatively impacting the sufferer, increasing morbidity and mortality.^{8, 10, 11}

The prevalence of mood disorders, including symptoms of depression and anxiety, has been increasing, which is of concern due to the blockages, social isolation, and economic and health-related concerns stemming from the COVID-19 pandemic, coupled with the risk of suicide increasing by 0.5% to 4% over a lifetime in the general population.^{10, 12}

Anxiety is a mood disorder and a common health problem. In this disorder, the individual is in an unpleasant affective state of anticipation, presenting as a reaction of heightened apprehension, arousal and vigilance because of a stressful event or in the absence of clear and immediate danger. Based on the criteria of the Diagnostic and Statistical Manual of Mental Disorders DSM-5, anxiety is defined as an excessive worry present more days than it is absent in a period of six months, difficult to control, associated with symptoms such as: restlessness, ease of fatigue, difficulty concentrating, irritability, muscle tension and sleep problems, affecting the work, school or social environment, and not attributable to other medical conditions.¹³⁻¹⁶

The anxiety disorders are the most prevalent group of mental illnesses and usually begin before or in early adulthood, which can cause greater cumulative damage and can often be comorbid with each other or with other disorders such as depression or substance abuse.¹⁵⁻¹⁸

Anxiety disorders have a prevalence of 7.3% worldwide, with an estimated 264 million people suffering from an anxiety disorder, occupying the ninth place in years lost due to disability (population indicator of years lost due to a condition). Cases were seen to increase during the first year of the COVID-19

pandemic (March 2020 to January 2021), reporting a 25% increment, which represents 76 million new cases.¹⁹⁻²¹

The frequency is higher in developed and developing countries, being more common in women with 5.5%, especially between the ages of 35 to 55 years, with depression and post-traumatic stress as comorbidity. In men it occurs in 3%, especially among those aged 15 to 19 years. In Latin America, it occupies the second place in years lost due to disability. In Mexico it occupies a prevalence of 14% of the population.^{20, 22}

Depression is a heterogeneous mood disorder, including emotional, cognitive, behavioral and biological symptoms, which can also be understood as a symptom or a disease, as a consequence of an emotional reaction to a problem. The DSM-5 manual defines depression as a disorder present most of the day, most days comprising two weeks, in which the individual has a feeling of sadness and hopelessness, decreasing interest and pleasure in activities, accompanied by weight loss, sleep disturbances, fatigue or chronic tiredness. The person suffering from depression may view him/herself, the world or the future in an excessively negative way. In addition, there is the possibility of developing ideas of death, attempted or completed suicide.^{12, 14, 16, 23-26}

Depression is the leading cause of disability and generates a great burden of morbidity worldwide, it is estimated that approximately 280 million people suffer from depression in the world, causing great suffering in the person who suffers from it, affecting their work, school and family life, generating more stress and dysfunction, which, in the worst-case scenario, can lead the person to suicide. Every year around 700,000 people end their lives as a result of this condition, being the main cause of death in the age group between 15 and 29 years of age. In addition, 20% of all patients develop a chronic course, which refers to having symptoms for 2 or more years.^{26, 27}

The group most at risk are adolescent and adult women, as their probability of suffering from this condition is 2:1 higher than in men. The use of exogenous hormones may be one of the most common factors in women that increase their risk of depression. It should also be noted that, although diagnosis rates are higher in women, suicide rates in men are three times higher than in women.^{23, 26, 28, 29}

RISK IN THE CONSUMPTION OF ANXIOLYTIC AND ANTIDEPRESSANT DRUGS

The antidepressant and anxiolytic drugs are a type of medication most commonly prescribed for young and middle-aged adults. The choice of these drugs depends largely on the consideration of the possible adverse effects of the drugs. (Table 1).³⁰⁻³⁸

The tricyclic antidepressants (TCAs) antagonize fast sodium channels, alpha 1 adrenergic, muscarinic acetylcholine (central and peripheral), histamine 1 and gamma-aminobutyric acid type A receptors of the Central Nervous System (CNS). The inappropriate or irrational use of this group of drugs can lead to intoxication with the respective affection of the neurological, cardiac and anticholinergic status. Sedation is the most frequent clinical neurological manifestation of intoxication by this group of drugs; in addition, confusion, delirium or hallucinations, convulsions and, in severe cases, coma may occur. TCA overdose generates cardiotoxicity due to the action of quinidine on cardiac tissues, causing deceleration of the action potential through the conduction system and the myocardium by triggering QRS prolongation and block, contributing to the development of ventricular arrhythmia and refractory hypotension, the former being a common cause of death due to this group of drugs.³⁹⁻⁴²

The drugs Selective Serotonin Reuptake Inhibitors (SSRIs) are a group of drugs that function to block transporters of serotonin or 5-hydroxytryptamine (5-HT), a neurotransmitter with a wide range of effects, including the regulation of attention, behavior, memory, thermoregulation, cognition, uterine contraction, gastrointestinal motility, vasoconstriction and bronchoconstriction. SSRIs are responsible for recapturing this molecule in the presynaptic neuronal termination, thus improving neurotransmission. The abuse of these drugs can lead to Serotonergic Syndrome (SS), a potentially fatal toxidrome with repercussions in both the peripheral and central nervous system as a result of alterations in the level of free serotonin or its receptors, causing neuromuscular abnormalities and changes in mental state. The serious and potentially fatal consequences are severe hypertonicity and hyperthermia, which can occur when consuming two or more groups of serotonergic drugs simultaneously, being the consumption with Monoamine Oxidase Inhibitors an important risk. Within the clinical manifestations it can be found an alteration of the mental state including anxiety, agitation and confusion, alteration of the autonomic nervous system such as diaphoresis, tachycardia, hyperthermia, hypertension, emesis and diarrhea, and finally neuromuscular alteration such as rigidity, hyperkinesia and hyperreflexia. In extreme cases, fever higher than 41°C, hemodynamic instability, delirium, renal failure, disseminated intravascular coagulation, acute respiratory distress syndrome and death may occur.⁴³⁻⁴⁵

The Monoamine oxidase inhibitors (MAOIs) are another group of drugs strongly associated with serotonergic syndrome. Monoamine oxidases (MAO) are enzymes bound to the outer mitochondrial membrane that are responsible for the oxidative deamination of biogenic and dietary amines, as well as hormones

Table 1. Main anxiolytic and antidepressant drugs and their important adverse effects.³⁰⁻³⁷

| Generic Name | Adverse Effects |
|---|--|
| Tricyclic Antidepressants | |
| Amitriptyline* | Blurred vision, constipation, increased appetite, dry mouth, nausea, diarrhea, fatigue, sedation, sexual dysfunction, increased blood pressure, urinary retention, drowsiness, headache, orthostatic hypotension |
| Imipramine* | Insomnia, sedation, dizziness, blurred vision, constipation, increased appetite, dry mouth, nausea, diarrhea, fatigue, sexual dysfunction, hypotension or high blood pressure, dysuria. |
| Desipramine | Blurred vision, constipation, increased appetite, dry mouth, nausea, diarrhea, fatigue, sedation, sexual dysfunction, increased blood pressure. |
| Trimipramine | Hypotension or arterial hypertension, arrhythmias, sedation, mydriasis, myoclonus, diaphoresis, tachycardia, hyperthermia, ileus, dysuria. |
| Selective Serotonin Re-uptake Inhibitors | |
| Fluoxetine | Arrhythmia, nasal congestion, nausea, diarrhea, dry mouth, initial anxiety, insomnia, drowsiness, dizziness and restlessness, decreased libido, anorgasmia, ecchymosis, bradycardia, urinary retention. |
| Sertraline | Abdominal pain, nausea, diarrhea, insomnia, dry mouth, initial anxiety, drowsiness, edema, dizziness and restlessness, decreased libido, anorgasmia, ecchymosis, arterial hypotension. |
| Fluvoxamine | Nausea, diarrhea, insomnia, dry mouth, initial anxiety, drowsiness, dizziness and restlessness, decreased libido, anorgasmia. |
| Paroxetine | Headache, diaphoresis, tremor, asthenia, nausea, diarrhea, insomnia, dry mouth, initial anxiety, drowsiness, dizziness and restlessness, decreased libido, anorgasmia, ecchymosis, constipation, orthostatic hypotension. |
| Citalopram | Nausea, diarrhea, insomnia, dry mouth, initial anxiety, drowsiness, dizziness and restlessness, decreased libido, anorgasmia, headache, diaphoresis, asthenia, palpitation, nasal congestion. |
| Escitalopram | Headache, vomiting, pruritus, angioedema, diaphoresis, nausea, diarrhea, insomnia, dry mouth, initial anxiety, drowsiness, dizziness and restlessness, decreased libido, anorgasmia, initial anisthenia. |
| Monoamine oxidase inhibitors | |
| Moclobemide | Nausea, vomiting, headache, constipation, high blood pressure, insomnia, arrhythmias. |
| Phenelzine | Nausea, vomiting, diaphoresis, arterial hypertension, sedation, orthostatic hypotension, headache, dry mouth, constipation, weight gain, sexual dysfunction, asthenia. |
| Tranlycypromine | Anxiety, restlessness, insomnia and tremors, headache, dry mouth, constipation, weight gain, sexual dysfunction, paresthesia, nausea, vomiting, diaphoresis, high blood pressure. |
| Benzodiazepines | |
| Clonazepam | Drowsiness, affective dullness, reduced alertness, confusion, fatigue, headache, dizziness, muscle weakness, ataxia or diplopia. |
| Diazepam | Hyporeflexia, ataxia, drowsiness, myasthenia, apnea, respiratory insufficiency, depression of consciousness |
| Alprazolam | Drowsiness, lightheadedness, headache, hostility, hypotension, tachycardia, nausea, vomiting. |
| Bromazepam | Hyporeflexia, ataxia, somnolence, myasthenia, apnea, respiratory failure, depression of consciousness. |
| Lorazepam | Hyporeflexia, ataxia, somnolence, respiratory failure, anaphylactic reactions, hyponatremia, hypothermia, muscle weakness, asthenia, hypotension, constipation, increased bilirubin, jaundice, increased hepatic transaminases, increased alkaline phosphatase, respiratory depression, apnea, worsening of sleep apnea, changes in libido, impotence, decreased orgasm. |
| Midazolam | Sedation, fatigue, nausea, vomiting, ataxia, adynamia, irritability. |
| Triazolam | Hyporeflexia, ataxia, somnolence, myasthenia gravis, apnea, respiratory failure, depression of consciousness, dependence. |

* Lethal doses of 1500 mg have been reported for both Amitriptyline and Imipramine.

neurotransmitters such as serotonin, dopamine, norepinephrine, epinephrine, tyramine, tryptamine and 2-phenylethylamine. There are two MAO isoforms, MAO A and MAO B. The MAO A is located mainly in the neurons of the CNS, they are in charge of metabolizing catecholamines and serotonin, so they are the target for antidepressant medication. The effects of excessive consumption of these drugs are similar to SSRIs (anxiety, agitation and confusion, diaphoresis, tachycardia, hyperthermia, hypertension, emesis and diarrhea, rigidity, hyperkinesia and hyperreflexia).⁴⁵⁻⁴⁸

The benzodiazepines are drugs that act by binding to gamma-aminobutyric acid (GABA)-A receptors, thereby enhancing their function, resulting in sedative, anxiolytic, hypnotic and muscle relaxant effects. These drugs are among the most prescribed psychiatric medications in the world as first line for the treatment of anxiety in primary care, a study by Bachhuber et al., 2016, revealed an increase in the number of deaths caused by overdose with benzodiazepines, increasing by 400% from 1996 to 2013, in addition to hospital emergency department visits increasing

by 300% between 2004 and 2011. Their use as first choice drugs is not recommended knowing their potential risks of tolerance, dependence, increased pain intensity, sleep disturbances, abuse and increased risk of tachycardia and respiratory depression, especially when ingested with alcohol or other drugs. Therefore, its use as an antidepressant and anxiolytic is limited to short periods, and its chronic use can lead to a reduction in the effectiveness of other anxiolytics. In the United States, rates of benzodiazepine abuse are found in young adulthood, with the typical age of onset of abuse in persons aged 18 to 25 years with 5.8%, followed by persons aged 26 to 34 years with 4%.^{19, 49, 50}

Although the use of antidepressants and anxiolytics in the young and middle-aged adult population is high, there is little information on the variety of adverse outcomes that may occur, because these studies have been conducted in small selected groups and over short time frames.⁵¹

In an analysis of a prospective cohort study (Casilla-Lennon MM, Meltzer-Brody S, Steiner AZ) conducted in women who

had been trying to conceive for 3 months, of whom up to 11% were taking SSRI antidepressants, MAOIs and TCAs, an increase in the levels of allopregnanolone, an endogenous neuroactive steroid that is a more potent modulator of gamma-aminobutyric acid type A receptors, which participates in negative feedback mechanisms to return to homeostasis in stressful situations, was observed. It is synthesized in the CNS, adrenal glands, ovaries, and testes. In situations of chronic stress, the response capacity of the hypothalamus-pituitary-ovary (HPO) axis is affected and allopregnanolone levels are reduced.^{52, 53}

Research in both rodents and healthy women shows increased levels of allopregnanolone, a consequence of the use of antidepressants, which causes a dysregulation of the HPO axis, an inhibition of the pulsatile action of gonadotropin-releasing hormone (GnRH), and thus reduced levels of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) and subsequently reduced ovulation rates, leading to infertility.^{52, 53}

Women treated with antidepressants for more than six months showed a 2.9 times higher chance of infertility than those who did not use these drugs, which represents a risk in their use in this population group.⁵¹

Discontinuation syndrome occurs in patients who abruptly discontinue treatment with antidepressants taken for six months or more. This is because antidepressant drugs inhibit the reuptake of serotonin and increase the level of serotonin at the synapse which decreases the sensitivity of postsynaptic receptors, the absence of this inhibition leads to an abrupt decrease in serotonin levels at the synapse, causing a failure to stimulate postsynaptic receptors. Symptoms include nausea, headache, nasal congestion and general malaise, generally appear on the second day, and last approximately one to two weeks, disappearing rapidly when treatment is resumed.³¹

Another associated risk, although uncommon, is the increase in the risk of suicide, which, although in general terms seems minimal, the figures by age groups vary, increasing in the child population; on the contrary, in the population over 65 years of age, antidepressant drugs have a protective effect against suicidal ideation. In the population group between 24 and 65 years of age, the risk of suicide is neutral, but not nonexistent, compared to the other two groups already mentioned. Suicidal risk can be assessed with the Sad Person scale, which gathers information on the patient's personal and social factors and gives them a score that, when added together, classifies the patient as a low, medium or high risk of suicide; it is widely used in clinical and educational settings as a predictive tool.^{54, 55}

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PHARMACOLOGICAL SITUATION IN MEXICO

The pharmacological situation in Mexico is one of the main factors involved in the bad practice of self-medication, since certain drugs can be purchased in pharmacies and establishments that are not authorized for their distribution. Two thirds of the total number of pharmaceutical establishments in the country are occupied by small and medium-sized pharmacies which, based on article 260 of the General Health Law, should have a pharmaceutical chemist-biologist, industrial pharmaceutical chemist or professional with a career related to pharmacy, or a physician in the conditions indicated in said article, as sanitary manager, but in the large pharmaceutical chains this position is occupied by employees who lack knowledge in this field. In Mexico, the states with autonomous universities that offer a degree in pharmaceutical chemist-biologist (QFB) are Baja California, Campeche, Chihuahua, Coahuila, Mexico City, Durango, Jalisco, Michoacán, Nayarit, Nuevo León, Oaxaca, Puebla, San Luis Potosí, Estado de México, Sinaloa, Tabasco, Tamaulipas, Veracruz, Yucatán, Querétaro and Zacatecas, while only states such as Morelos, Hidalgo, Puebla, Quintana Roo and Mexico City have a pharmacy degree in their autonomous universities. Therefore, it is necessary the collaboration between universities, pharmacists and the Ministry of Health to develop guidelines and protocols to achieve a homologation of pharmaceutical care at national level in favor of quality services, following the guidelines present in articles 226 and 245 of the General Health Law.⁵⁶⁻⁵⁹

FACTORS ASSOCIATED WITH SELF-MEDICATION

Some factors that influence the practice of self-medication include mild symptoms, lack of health insurance, health care costs, social, cultural and economic environment, the country's legislation for easy access to drugs, and previous experience.^{1, 6, 60}

It was also observed that the prevalence is higher in the female sex, attributed to the fact that women consume drugs more frequently than their male counterparts due to the fact that gynecological problems cause their more recurrent association with drugs, in addition to the fact that most of them are the ones who seek information about their ailments in order to solve them. Factors such as increased exposure and access, pressure from partners, the need to escape from problems such as poverty, physical or sexual violence, are social causes of high impact on this population group.^{1, 5, 61}

The economic level is also a factor that plays an important role in the prevalence of self-medication due to the fact that high-income countries have a lower prevalence compared to middle- and low-income countries, as they have a better quality of care,

as well as drug supply programs. This means that people do not have the resources to go to a health institution, do not have the necessary supplies, or cannot afford to buy the recommended quality medicines or buy the wrong ones.^{1,6}

Another important point has been that some people still hesitate to go to the facilities of a medical center or hospital, because they consider it dangerous because they think that the staff or patients are carriers of the COVID-19 virus.²

Currently, the media such as social networks and the internet play an important role as a source of information for the practice of self-medication in young people compared to television, radio and other classic sources, now they rely more on the information they find than on going to health professionals.^{62,63}

Family recommendations have a great influence, especially in young people, since repeating treatment for previous prescriptions continues to be practiced, together with the use of leftover medicines stored at home.⁶³

The high level of education is an important factor in the prevalence of self-medication in students; access to sources of knowledge about drugs is key when seeking treatment in comparison with people with a lower level of education who tend to consume only the drugs prescribed by a physician. The study by Behzadifar et al, 2020 found a prevalence of self-medication of 97.2% among medical science students, which is more than double the prevalence of 47.7% among non-medical students. This is partly due to the confidence that students have in being more aware of the effects of drugs. Self-medication with antidepressants and anxiolytics is estimated at 2% and 12-29% respectively in medical students. In addition to having a broader knowledge due to their academic training, medical students have more easily accessible drugs in their health centers, which allows them to use them for self-treatment.^{1,2,64}

Time was another factor why young people did not go to a health professional, because in their opinion, not going to a health professional saves time.³

The type of illness is another factor taken into account when carrying out actions regarding self-medication, since students classify their illnesses as serious and non-serious, so for non-serious illnesses they make use of their previous experience with medications, or consult with pharmacy personnel for the choice of drugs.³

Among the student population, the academic year they are in also has an influence, as it is reported in a study conducted by Zeru 2020 in university students, that the prevalence of self-medication in sixth year students is higher compared to first year students, due to their greater knowledge and understanding of

drugs, which leads to greater confidence in self-diagnosis and its management.⁵

Another problem that affects the practice of good mental health is the still existing social belief that mental disorders are not treatable, as well as mistreatment, rejection and isolation that exists towards people who suffer from them, leading to discrimination and violation of the human rights of such people, so that going to health professionals is still a stigmatized practice by much of society. Added to this, investment in mental health care is insufficient in low- and middle-income countries, having figures of \$2.00 dollars per capita, while, in high-income countries, investment per capita is estimated at \$58.73 dollars. In Mexico, in 2017 the budget for mental health was \$2, 586 million pesos, which represents a little more than \$1.00 dollar per capita.⁶⁵

PHARMACOVIGILANCE IN MEXICO

The World Health Organization established international pharmacovigilance goals of 200 annual reports per million inhabitants in each country, of which Mexico has not met until a few years ago. Despite the fact that these figures have been reached at present, the quality of the reports is poor because most health personnel do not have the necessary training to carry out pharmacovigilance activities and do not give enough importance to this aspect, partly because they assume that the drugs used worldwide are safe and that a safety reevaluation is not necessary. In addition, there is a belief of a negative impact on the act of making an adverse reaction report, by the possibility of being singled out for malpractice and the possibility of facing a lawsuit.⁶⁶

The National Center for Pharmacovigilance reports that most of the reports of suspected adverse reactions are made by the chemical-pharmaceutical industry, and then by state centers, public institutions and clinical studies, while the participation of health personnel, hospital pharmacovigilance units, bioequivalence studies and participants is almost nil. It is evident that in Mexico there is still much to be done in this area, since health systems should be primarily responsible for identifying and analyzing information related to the effects of drugs, in order to establish measures to improve the safety profile of drugs.⁶⁶

CONCLUSION

The concern about the consumption of antidepressant and anxiolytic drugs without medical prescription has been increasing, especially because it affects the young population to a greater extent and increases more and more due to different factors such as greater social isolation, unreliable sources of information, influence of social networks, among others, representing a future problem of which little is known about the factors and the consequences that can be generated since there is no extensive study for this type of medication and the few studies

conducted have been for short periods of time and in small groups of people. Therefore, it is essential to have a comprehensive training for health professionals in which they are able to identify the risk factors for self-medication, as well as to identify in a timely manner and diagnose mood disorders so that patients have an early and appropriate treatment, as well as to be able to inform the population of the risks associated with the consumption of antidepressant and anxiolytic drugs in an incorrect or unjustified manner. In addition, due to the lack of research at the national level on the consumption of psychotropic drugs in the general population, measures should be proposed to encourage the correct self-consumption of these drugs, based on feasible statistics that help to identify the problems that cause them, the vehicle for obtaining the drugs and the consequences of their consumption, with the aim of encouraging the development of legislation that favors the protection of consumer health (such as including legends on labels that warn about the risks of their use) and promote greater pharmacovigilance by the corresponding instances.

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