

## I'm a medical student! Do i need psychotropic drugs?



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### ABSTRACT

The indiscriminate use of psychotropic drugs among medical students is a growing concern that reflects not only challenges related to academic stress, but also questions about the social pressures and expectations imposed on these future health professionals (DE LUNA et al, 2018). This phenomenon raises ethical, mental health, and academic issues, as the use of psychoactive substances can impact not only academic performance, but also the quality of care these students are destined to provide to patients (SANTOS et. al, 2021).

**Keywords:** Indiscriminate, Phenomenon raises.

### 1 INTRODUCTION

The indiscriminate use of psychotropic drugs among medical students is a growing concern that reflects not only challenges related to academic stress, but also questions about the social pressures and expectations imposed on these future health professionals (DE LUNA et al, 2018). This phenomenon raises ethical, mental health, and academic issues, as the use of psychoactive substances can impact not only academic performance, but also the quality of care these students are destined to provide to patients (SANTOS et. al, 2021).

Mental health can be understood as a state of well-being where the individual is able to be productive, contribute to the community, and overcome the stress of everyday life (BRASIL, 2020). However, it is noticeable in the day-to-day life of the medical student of the University Center of Caratinga – UNEC that the stress experienced by them substantially harms learning, physical health and especially mental health.

It is important to approach this issue sensitively, recognizing the complexities of the academic environment and the individual factors that contribute to the decision to seek help through psychotropic drugs. As highlighted by recent studies, "the stigma surrounding mental health in the medical field can create a significant barrier for students seeking support, leading to self-destructive strategies such as self-medication." (VIEIRA AND DELGADO, 2021).



In view of the obstacles observed, several institutional and personal factors can contribute to the worsening of the mental health of medical students. Among them, academic pressure is cited through competitiveness among students, teacher demands, high curriculum, financial difficulties, sleep deprivation, limited time to study, difficulty in reconciling leisure activities, and the frequent presence of perfectionism and self-demand, which are personality traits of many students (KAM et al, 2019).

## 2 DEVELOPMENT

### 2.1 WHAT ARE PSYCHOTROPIC DRUGS?

The term psychotropic is applied to compounds that modify psychic functions and mental states, due to their ability to alter the action of neurotransmitters in the brain and may act by stimulating or depressing the central nervous system (CNS). They are mainly used for the treatment of mental disorders, such as: psychoses, anxiety and depression disorders, attention deficit hyperactivity disorder (ADHD) and bipolar affective disorder (DORLAND, 1985).

Psychotropic drugs are the group of pharmacological agents most used by the general population, often incorrectly and without prescription (KATZUNG et al, 2013). In the area of health, the abuse of these deserves even more prominence, since access to psychotropic drugs is easier due to greater contact with medical professionals (DE LUNA et al, 2018).

Psychostimulants are drugs that increase concentration and alertness and are mainly used to treat ADHD. Because it acts to enhance cognition, the use of this substance has grown in academia (PAIVA et. al, 2020).

Psychotropic drugs, which are a subclass of psychoactive substances that act on the central nervous system, were the most used and can be indicated as anxiolytics, sedatives and hypnotics, antidepressants, antipsychotics, mood stabilizers, anticonvulsants and central nervous system stimulants (RANG et al, 2015).

Anxiolytic drugs have the function of reducing anxiety and exerting a calming effect, and hypnotics generate drowsiness and preserve the state of sleep (KATZUNG et al, 2013). Treatment for anxiety encompasses both pharmacological and non-pharmacological, in which both must be present for a good prognosis (CROCQ MA, 2017).

Antidepressants are classified according to pharmacological characteristics or chemical structures. Regarding the most commonly used class of antidepressants, serotonin reuptake inhibitor antidepressants are the most widely used, being recommended as first-line treatments (BANDELOW et al, 2017).



## 2.2 FACTORS THAT INFLUENCE THE USE OF PSYCHOTROPIC DRUGS

It is known that more and more people have been at the forefront of factors that affect mental health. Medical students, in particular, are exposed to institutional and personal issues that contribute to the worsening of mental health, for example, teacher demands, limited study time outside of college, self-demand, sleep deprivation, extracurricular activities, and adaptation to a new city far from home (ARAÚJO; OLIVEIRA, 2019, p. 2).

In view of the decrease in the quality of life of the student, difficulty in social relationships and abuse of substances such as psychotropic drugs may arise. In addition, when it comes to medical students, the increase in stress already begins in the entrance exam. Then, in graduation, the obligation to routine, workload, an expectation of high performance, and lack of other activities unrelated to medicine require a well-developed emotional maturity (KAM et al, 2019).

The aforementioned factors predispose students to mental illnesses such as depression and anxiety (SANTOS et. al, 2021). As a way to deal with all this stress suffered, students have sought relief from the use of substances such as psychotropic drugs, which often occurs inappropriately (TEIXEIRA et. al, 2020).

According to a population-based study conducted with more than 40,000 individuals, the practice of self-medication is common in Brazil (ARRAIS et al., 2016) and this scenario is no different among university students (SILVA et al., 2012).

## 2.3 TYPES OF SUBSTANCES USED BY MEDICAL STUDENTS AND THEIR EFFECTS

In addition to the use of psychotropic drugs, students also use natural psychostimulants that in high doses can cause tolerance and dependence. The effects are very similar to the physiological one, which ends up making it imperceptible to the individual (SILVEIRA et. al, 2015).

Psychostimulant drugs work by increasing concentration, attention, and energy, but they have the side effect of increasing blood pressure and heart rate, as well as changing mood. Among these substances, methylphenidate is the most used by medical students, since it acts by blocking the reuptake of dopamine, making this neurotransmitter more available in the synaptic cleft and thus causing stimulation of the central nervous system (SILVEIRA et. al, 2015).

In addition to the abusive use of the substances already mentioned among medical students, there are other classes that are used, such as anxiolytics and antidepressants, which act to reduce symptoms such as lack of energy, concentration and interest, in order to normalize mood. Such antidepressant drugs produce an increase in the concentration of neurotransmitters in the synaptic cleft, inhibiting metabolism, blocking the reuptake of neurotransmitters such as serotonin, noradrenaline and dopamine, and acting on presynaptic receptors (MORENO and SOARES, 1999).



In Brazil, a recent study identified that complaints of anxiety during medical school were higher than those of depression, which was more prevalent before entering the undergraduate program. The authors also identified extremely high levels of psychological stress and burnout, the latter being prevalent in 80% of students (CASTALDELLI-MAIA et al., 2019).

Antidepressants can cause side effects, depending on the class used, such as dryness of the eyes and mouth, tachycardia, tremors, constipation, drowsiness, weight gain, sexual dysfunctions, sweating, and diarrhea (CRUZ et. al, 2020).

## 2.4 MECHANISM OF ACTION OF PSYCHOSTIMULANTS

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The irregular and indiscriminate use of substances such as methylphenidate, Stavigile, Venvanse, among others, can have serious side effects, for example: insomnia, weight loss, irritability, abdominal pain, in addition to affecting mental health and causing dependence on the use of this medication in some users (EVANGELISTA, 2018).

More specifically, methylphenidate inhibits dopamine and noradrenaline transporters, which are the neurotransmitters responsible for the circuitry of emotions, blocking the reuptake of these substances. In this way, there are more neurotransmitters available in the synaptic cleft to act (PAIVA, GALHEIRA and BORGES, 2019).

## 3 FINAL CONSIDERATIONS

The indiscriminate use of psychotropic drugs by medical students is one of the main targets of study regarding their mental health and can be justified by the desire to improve productivity and concentration, as well as normalizing mood due to the excessive demand of the curriculum that requires intense effort and dedication from them.

It is known that such use can cause dependence and, therefore, it is necessary to analyze the reasons for this practice to understand them to intervene so that there is a reduction of harm.

It is verified by the present bibliographic survey that there are indications of strong correlations between the various variables that can generate anxiety and psychic disorders in university students and the false non-effective treatment verses the search for medications as a way to alleviate the suffering due to feelings of incompetence, fear of reproach, reprimand from parents and/or financial guardians, due to the high cost of tuition in private intuitions.

In view of this survey, there is a need for tactics and actions that point out the correct use of psychotropic drugs, their risks and benefits. It is essential to have more studies that seek to know the



mental health of the admissions versus those of the graduates, in the medical courses of private education institutions.



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