

# The Influence of Knowledge Acquired by Medical Students on Self-Medication

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## ABSTRACT

Medical students are susceptible to the problem of improper self-medication because they have a heavy workload. In addition, they have greater access to medical information. These factors influence students to self-medicate instead of seeking specialized care. The objective of this study is to verify the influence of knowledge acquired by medical students on self-medication. The study is a systematic review of the literature. Articles in Portuguese and English published between 2018 and 2024 were included, excluding all studies that used secondary data and data prior to 2018. The practice of self-medication is prevalent in academic settings, with alarming rates of up to 92.7%. The relationship between progress in medical school and the frequency of self-medication is evident, highlighting a significant increase as students progress through their academic cycles. This behavior not only reflects a false sense of security generated by the acquired knowledge but also leads to considerable side effects, such as nausea, cardiorespiratory symptoms, and the worsening of clinical conditions.

**Keywords:** Self-medication; Students; Medicine

## INTRODUCTION

According to the World Health Organization (WHO), the term "self-medication" refers to the consumption of medicines without the advice of a qualified health professional (WHO, 2005). Thus, despite not having the necessary qualifications to recognize diseases, identify their severity, or choose the most appropriate therapy, individuals determine the medication to be used (SIMÕES; FARACHE, 1988). According to Schuelter-Trevisol (2011), mental health problems and psychiatric issues may be related to the use of medications without a prescription. Medical students are not exempt from this reality and live with a heavy workload and greater access to medical information. Such situations influence students to self-medicate instead of seeking specialized care. Therefore, this project seeks to verify the influence of knowledge acquired by medical students on self-medication.

## METHODOLOGY

In this study, a systematic review of the literature was performed, which consists of gathering and statistically synthesizing the results of studies in the area of interest. Thus, to search for studies, we will use the following repositories: *Pubmed*, *SciELO*, and

the Virtual Health Library (VHL). Articles in Portuguese and English published between 2018 and 2024 will be included. The descriptors used will be: "Self Medication," "Students," and "Medical." All studies that used secondary data and data prior to 2018 were excluded. Eight articles were selected to compose this systematic review.

## **RESULTS**

A survey commissioned by the Institute of Science, Technology, and Quality (ICTQ) revealed a worrying scenario: in Brazil, 86% of respondents use medications without the guidance of a prescriber. Specifically in the medical field, more precisely among medical students, it is possible to draw a parallel between these academics and the feeling of aptitude for self-medication. Although this is an alarming reality, considering that students are expected to be aware of the risks of administering medication without proper professional guidance, this practice is prevalent in the university-medical environment.

According to an observational study on the subject, 92.7% of participants admitted to self-medicating, with 3% stating that entering medical school influenced the start of this practice and 42% reporting an intensification of the behavior (BRITO; CASTILHO, 2021). The reliability of this research is corroborated by data collected at the State University of Pará (UEPA/Marabá), where, in a survey conducted in 2020 with 104 medical students, 89.4% reported using medication without a prescription (PISMEL et al., 2021). Similar results were obtained through research conducted at the Federal University of Jataí, in the state of Goiás (UFJ), with a self-medication rate of 90% (BERNARDES et al., 2020). In addition to the above, it is essential to point out the associative relationship between the frequency of self-medication and the knowledge acquired through student cycles.

According to a cross-sectional study conducted with 320 students in the first four semesters of the medical course at Universidade Brasil, Fernandópolis-SP campus, 309 of them, corresponding to 96.56% of the participants, considered self-medication a viable and easily accessible option, even after having access to package inserts and being aware of the possible health risks. It was also possible to observe a relationship between the gradual increase in self-medication and the proximity of the end of the course. In the first year of medical school, 14 of the respondents (17.5%) reported using four medications per year. Between the second and fourth years, consumption increased to eight to ten medications per year, with 27 respondents (33.75%) in the

second year, 25 (31.25%) in the third year, and 43 (53.75%) in the fourth year (TOGNOLI et al., 2019). Similar results were found in a prevalence study, which showed that in a sample of 148 medical students, 44.57% self-medicated in the first and second years of the course, and 71.42% in the third and fourth years (MORAES et al., 2018), as well as in a cross-sectional analysis of 158 medical students, which revealed that 45 students in the first semester (28.4%), 34 in the second semester (21.5%), 45 in the third semester (28.4%), and 34 in the fourth semester (21.5%) reported practicing self-medication (LÁZARO et al., 2020). Finally, the relationship between the use of knowledge acquired in the academic environment and the gradual increase in self-medication behavior between the basic, clinical, and internship cycles in an observational study stands out, being 62.7%, 73.8%, and 100%, respectively (BERNARDES et al., 2020).

As a final subtopic, it is possible to draw a parallel between medical students who self-medicate and the side effects resulting from this practice. Given this scenario, according to a cross-sectional study conducted with 148 medical students, when asked if they experienced any side effects after using drugs without a prescription, 26.56% answered yes. Among those who experienced this situation, the most commonly observed effect was nausea/vomiting/dizziness (34.78%), followed by cardiorespiratory symptoms (31.43%), increased existing symptoms and/or signs (19.57%), and skin manifestations (15.22%) (MORAES et al., 2018). Similar findings were observed in analyses such as that carried out in a study involving 83 medical students who, at some point, had self-medicated, of whom 13.25% suffered some adverse event as a result of this practice, such as worsening of their condition and symptoms of intoxication (NETO; BARBOSA; FERRARI, 2024). In addition, a study of 210 health students (not restricted to medical students) also found that 97.14% of them had self-medicated, and 6.6% reported complications, with 14.28% complaining of drowsiness, nausea, and stomach pain (QUERINO; ROCHA, 2023)

## **CONCLUSION**

Thus, it is possible to recognize that the practice of self-medication is prevalent in academia, with alarming rates of up to 92.7%. The relationship between progress in medical school and the frequency of self-medication is evident, highlighting a significant increase as students progress through their academic cycles. This behavior

not only reflects a false sense of security generated by the acquired knowledge but also leads to considerable side effects, such as nausea, cardiorespiratory symptoms, and worsening clinical conditions. This situation highlights the urgent need for educational and political interventions that promote awareness of the risks of self-medication.

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