

## Assessment of the practice of self-medication by academics of a Nursing School in the south of Minas Gerais - Brazil

### Avaliação da prática da automedicação por acadêmicos de uma Faculdade de Enfermagem do sul de Minas Gerais - Brasil

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#### **ABSTRACT**

Considered to be one of the problems to public health, the practice of self-medication and drug intoxications are occurrences that classify a large percentage in Brazil. The present study describes the index of self-medication for analgesics and anti-inflammatories among a number of students in the 1st and 7th years of the nursing course of Wenceslaus Braz Nursing School, Itajubá-MG. A field survey was conducted in which a questionnaire containing 17 (seventeen) questions related to self-medication was provided. The research aimed to demonstrate and affirm through the data that were obtained that nursing students, a course that covers total knowledge about benefits and risks caused by medicines, stand out in the practice of self-medication. This practice of self-medication by nursing and nursing professionals results from self-confidence, which originates from their training.

**Keywords:** self-medication, academics, nursing.

#### **RESUMO**

Considerado um dos agravos à saúde pública, a prática da automedicação e as intoxicações por medicamentos são ocorrências que classificam um percentual numeroso no Brasil. O estudo aqui apresentado descreve sobre o índice da automedicação por

analgésicos e anti-inflamatórios entre um determinado número de estudantes do 1º e 7º período do curso de enfermagem da Escola de Enfermagem Wenceslau Braz, Itajubá-MG. Foi realizada uma pesquisa de campo onde foi fornecido um questionário contendo 17 (dezesete) questões relacionadas à automedicação. A pesquisa teve intuito de demonstrar e afirmar por meio dos dados que foram obtidos que estudantes de enfermagem, curso esse que abrange totais conhecimentos sobre benefícios e riscos causados pelos medicamentos, se destacam na prática da automedicação. Essa prática da automedicação por acadêmicos de enfermagem e profissional de enfermagem resulta da autoconfiança, oriundo de sua formação.

**Palavras-chave:** automedicação, acadêmicos, enfermagem.

## 1 INTRODUCTION

Self-medication is a procedure in which its main characteristic is the fact that the patient or responsible person takes the initiative to use such a medicine seeking the relief of symptoms or treatment of ailments (BARBOSA and BOECHAT, 2012).

The practice of self-medication can be carried out in various ways, either by using old recipes and non-compliance with the professional prescription, prolonging or shortening the time of treatment, sharing medicines with people of their living together or using leftovers from another prescription (ARRAIS, COELHO and BATISTA;1997).

According to the author mentioned above, in developing countries, such as Brazil, self-medication can be considered a necessity that complements the health system. However, when the indiscriminate use of the drugs occurs undesirable effects such as: increased bacterial resistance to antibiotics and even a cerebral hemorrhage due to the combination of an anticoagulant with a simple analgesic (CERETTA and RODRIGUES, 2005).

The main factors that lead the population to self-medicate are: difficulty of access to the hospital, convenience; followed by the fact that the population believes they already know how to use the medicine and so they self-medicate, and finally, economic difficulties are pointed out as a reason for self-medication (CERETTA and RODRIGUES, 2005).

The most commonly used class of drugs among all therapeutic agents are non-steroidal anti-inflammatory drugs (NSAIDs). There are already more than 50 different NSAIDs in the Brazilian pharmaceutical market and these are present in most of the irrational drug associations available in the form of over-the-counter sales, and among them are also acetylsalicylic acid (ASA), paracetamol, nimesulide, and diclofenac sodium

(RIBEIRO, SEVALHO and CÉSAR; 2007). NSAIDs are prescribed for generally "rheumatic" musculoskeletal pain, but the population uses them over the counter for less severe pain.

Various disorders can be caused by the misuse of drugs, such as side effects and adverse reactions (ABRAHAM; SIMAS and MIGUEL, 2009). None of the anti-inflammatory drugs on the market are considered ideal, due to a wide variety of side effects such as: adverse kidney effects, intestinal disorders, liver disorders and bone marrow disorders (WANNMACHER, 2005).

Pain relievers are one of the most commonly used pain relieving groups, certainly because they are easy to purchase because they are freely available and available outside pharmaceutical establishments, such as markets and bars (TIERLING et al., 2004). Analgesics have adverse reactions that can be divided into two groups: true allergic reaction and pseudo allergic reaction.

The true allergic reaction is the anaphylactic reaction, the most common being the immune mechanism. It may or may not be associated with other manifestations such as angioedema, urticaria and maculopapular rash, besides asthma attack (TIERLING et al., 2004).

According to the author cited above, pseudo-allergic reactions are characterized in respiratory attacks with bronchospasm. Self-medication is constant through its indiscriminate use by the population, even in the face of the intense variety of adverse reactions and unwanted results to drugs (TIERLING et al., 2004).

According to what has been explained, the interest in the theme arose after a conversation between the authors and the students of the school about medicines and after realizing, on several occasions, the sharing of analgesic medicines amongst the students due to headaches.

The objective of this study was to evaluate the practice of self-medication with analgesics and anti-inflammatory drugs among the 1st and 7th nursing period scholars of the Wenceslau Braz School of Nursing.

## **2 METHOD**

The following is information related to the study scenario, design and ethical aspects of the research.

The scenario is constituted in the city of Itajubá, which is located in the southern region of Minas Gerais, and had as its place of research the Wenceslau Braz Nursing

School (EEWB) that arose from the idealism of three nurses who worked in the Santa Casa de Misericórdia of the city in 1954.

This study has a quantitative, descriptive, analytical and cross-sectional approach. The quantitative research approach is used when the objective and credibility of the findings is to be ensured and the proposed question indicates the concern with quantification or when events need to be compared, or replicated (POLIT and BECK; 2011).

Descriptive research proposes a description of the characteristics of a given population or phenomenon and establishes relationships between variables without the concern of reaching out to the causes that produce them (GIL, 2004).

Analytical research is usually subordinated to one or more scientific questions, the "hypotheses", which relate events: a supposed cause and a given effect (BONITA, BEAGLEHOLE and KJELLSTRÖM; 2010).

The cross-sectional survey is the study of a single point in time. The data is collected at a given and unique time point. It is advantageous because they are relatively fast and easy to carry out (POLIT and BECK, 2011).

The population of this study was represented by academics from the 1st and 7th nursing period of the Wenceslau Braz School of Nursing, Itajubá-MG, both male and female, due to the fact of assessing if there is a difference in the level of practice of self-medication among students who are starting or are finishing the course.

In view of this, the sample size was 30 nursing academics, being divided into 15 1st period academics and 15 7th period academics, according to pre-established criteria of readability and unreadability.

The data collection was carried out in 2017 and developed through two distinct steps: in the first, the necessary and appropriate procedures were established for the actual data collection, and in the second moment, the instrument created for the data collection itself was presented.

The data collection instrument was prepared by the authors of this project themselves and is made up of a closed questionnaire, made up of 17 questions, in which the researched person is characterized as to sex and age, and informs if he has already made use of analgesics and anti-inflammatories without a medical prescription, and with what frequency.

The questionnaire was made up of questions that referred to the use, in the last week, of these two medicines mentioned above and for how many times, what factor and

what symptoms led the student to self-medicate initially, and if he has suffered any side effect due to self-medication with anti-inflammatories, among others.

The data was entered, electronically, into a database of its own, drawn up from the computer program SSPS, version 22.0. SPSS is scientific software. Originally the name was an acronym for *Statistical Package for the Social Sciences* - statistical package for the social sciences, but currently the SPSS part of the software's full name (IBM SPSS) has no meaning.

For the data analysis, descriptive statistics were used by means of absolute and relative frequency for categorical variables, as well as trend and central dispersion measures for continuous variables.

The present study followed the precepts established by Resolution 466/12, of December 2012, of the Ministry of Health and only started after approval, through the Consubstantiated Opinion number 1.430.476, of the Ethics and Research Committee of the Wenceslau Braz Nursing School, Itajubá, MG.

### 3 RESULTS AND DISCUSSION

The results will be presented in six different forms and in table format, being numbered and described as follows: 1- Personal characterization of the study participants; 2 - Use of analgesics by the study participants; 3 - Use of anti-inflammatory drugs by the study participants. 4- Information related to self-medication. 5 - Perception of self-medication. 6 - Side effects of self-medication.

TABLE 1 - Personal characteristics of study participants. Itajubá - MG, 2016 (n=30)

Variables	Frequency	Percentage	Medium	Standard Deviation
<b>Age</b>			21.4	5.4
<b>Gender</b>				
Male	5	16.7		
Female	25	83.3		
<b>Period</b>				
First	15	50.0		
Seventh	15	50.0		

Source: Research instrument

The mean age was 21.4 years ( $SD \pm 5.4$ ). A similar result was evidenced in the study conducted by Rios et al. (2013), to verify the characteristics of self-medication of the students of a technical school in the south of Minas Gerais, where 57.0% of the students were between 20 and 22 years old.

The predominant sex was female, with an absolute frequency of 83.3%. A similar result was found by Aquino, Barros and Silva (2010), in a study carried out with students in the health area, verifying that the largest number of participants was female (61.4%). 50.0% of the participants were from the first period; 50.0% were from the seventh period.

TABLE 2 - Use of analgesics by study participants. Itajubá - MG. 2016 (n=30)

Variables	Frequency	Percentage
<b>Use of Non-Prescription Analgesics</b>		
Yes	30	100.0
<b>Analgesic used</b>		
Paracetamol	4.	13.3
Dipyrone	5	16.7
Both	21	70.0
<b>Use of analgesic in the last week</b>		
None	24	80.0
A	4.	13.3
Three	2.	6.7
<b>Analgesic used in the last week</b>		
Paracetamol	4.	13.3
Dipyrone	2.	6.7
THE	24	80.0

Source: Research instrument

It was identified that 100.0% of the study participants make use of analgesics without a prescription. In a survey carried out among graduates from different areas of the academic formation of the University of the South of Santa Catarina, it was found that 330 (96.5%) have already carried out this practice (GALATO, MADALENA and PEREIRA; 2012).

In a private institution in the south of the state of Minas Gerais, 697 (93.11%) health graduates self-medicated (Silva et al., 2011). 70.0% of them used Dipirona and Paracetamol. In the research conducted by Damasceno et al. (2007) the most commonly used drugs were: Dipyrone (31.3%) and Paracetamol (15.9%). 80.0% did not use in the last week.

TABLE 3 - Use of anti-inflammatories by study participants. Itajubá - MG. 2016 (n=30)

Variables	Frequency	Percentage
<b>Use of anti-inflammatory drugs without Prescription</b>		
Yes	30	100.0
<b>Anti-inflammatory used</b>		
Ibuprofen	3.	10.0
Diclofenac sodium	1.	3.3
Diclofenac potassium	2.	6.7
Prednisone	2.	6.7
Dexamethasone	3.	10.0
More than one	19	63.3
<b>Use of Anti-inflammatory in the last week</b>		

None	26	86.7
A	2.	6.7
Two	1.	3.3
Five or more	1.	3.3
<b>Anti-inflammatory used</b>		
Ibuprofen	3.	10.0
Prednisone	1.	3.3
THE	26	86.7

Source: Research instrument

It was identified that 100.0% of the study's participants make use of anti-inflammatory drugs without a medical prescription. 63.3% of them used more than one drug. m86.7% did not use it in the last week. In studies conducted by Loyola Filho et al. (2002), Schuelter-Trevisol et al. (2011) and Aquino et al. (2010), these drugs were also the most consumed by those researched, with the respective frequencies, 47.6%, 44.9% and 24%. The explanation for the greater use of these drugs is related to the ease of purchase and the idea that they are substances that do not present health risks, because many of them are classified as over-the-counter drugs (RIOS et al.; 2013).

TABLE 4 - Information related to self-medication. Itajubá - MG. 2016 (n=50)

Variables	Frequency	Percentage
<b>Factor of self-medication</b>		
Lack of access to the doctor	2.	6.7
Lack of time	6	20.0
Other	22	73.3
<b>Have they been prescribed in the last 12 months?</b>		
Yes	21	70.0
No	9	30.0
<b>Whose guidance do you use?</b>		
Own	13	43.3
Mother and father	4.	13.3
Doctor and nurse	5	16.7
Internet	5	16.7

Source: Research instrument

It was evidenced that 73.3% allege another reason, besides the lack of doctor and time for consultation, as a factor of self-medication. 70.0% use the medicines, since they have already been prescribed in the last 12 months. 43.3% make use of their own guidance to make use of medicines.

According to the self-medication based on the knowledge acquired in the faculty, it can be observed that in all courses, the majority of academics used their undergraduate knowledge for the realization of this practice. Authors report that there is a trend of the prevalence of self-medication among people with a higher level of schooling, considering that knowledge can give greater security to this practice (VILARINO et al.; 1998).

TABLE 5 - Perception of self-medication. Itajubá - MG, 2016 (n=30)

Variables	Frequency	Percentage
<b>Symptom leading to self-medication</b>		
Headache	7	23.3
More than one symptom	23	76.7
<b>Base for use*</b>		
Theoretical knowledge	12	40.0
Family members have used	10	33.3
<b>Same drugs for the same symptoms?</b>		
Yes	2.	4.0
What's available at home	15	50.0
<b>Availability at home</b>		
I always try to have it at home	21	70.0
I always buy when I need to	9	30.0
<b>Does it harm your health?</b>		
Yes	7	23.3
No	23	76.7
<b>Dependence?</b>		
No	30	100.0
<b>Have you ever made use of advertising?</b>		
Yes	10	33.3
No	20	66.7

Source: Research instrument

It was found that 76.7% performed self-medication due to more than one symptom. Coincidental result was found in the study by Damasceno *et al.* (2007), which mentions the set of cases related to pain, as the main reason that led graduates to practice self-medication (54.8%). 40.0% consider having enough theoretical knowledge.

Silva and Rodrigues (2014) cited in their study that of the total of participants, 166 (80.9%) said that knowledge interfered with their practice of self-medication. 70.0% always try to have their medicines at home.

In the same study cited above, in relation to the ways of purchase, of the total number of pupils, 172 (72.9%) bought the medicine. 76.7% believe that self-medication does not harm health and 100.0% believe that it does not cause addiction; 66.7% do not use drugs based on advertisements.

TABLE 6 - Side effects of self-medication. Itajubá - MG. 2016 (n=50)

Variables	Frequency	Percentage
<b>Side effect by analgesic</b>		
Yes	3.	10.0
No	27	90.0
<b>Which one?</b>		
Hypotension	1.	3.3
Heartburn	2.	6.7
THE	27	90.0
<b>Side effect by anti-inflammatory</b>		
Yes	2.	6.7
No	28	93.3



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Which one?		
Heartburn	2.	6.7
THE	28	93.3

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Source: Research instrument

It was found that 90.0% and 93.3% of the participants claimed not to have had side effects by analgesics and anti-inflammatory, respectively. 6.7% reported feeling heartburn as a side effect.

As demonstrated by the work with other populations, self-medication is a common practice among people, presenting itself at high frequencies in several studies (VILARINO et al., 1998; MAZZILLI, 2008; BECKHAUSER et al., 2010).

In view of this, it is clear the need for intervention in the educational structure, through effective methods and protocols, with the intention of alerting the students of health courses about the risks of this practice. Those responsible for the academic training of students of health courses should focus on ethical questions, considering that the practice of self-medication, in the majority of cases, is contrary to the rational use of medicines.

#### 4 FINAL CONSIDERATIONS

This study showed evidence that the practice of self-medication was elevated among the graduates of the first and seventh periods of the Nursing course, however, it is within the parameters observed in other works. As in other studies, the female sex also prevails.

One set of symptoms were the main complaints that led to the practice of self-medication. Analgesics, antitherms and anti-inflammatory drugs have been shown to be the classes of drugs most used to relieve these symptoms.

Given the high rate of self-medication, there is a need for better supervision regarding the sale of medicines in pharmacies and, in particular, in establishments that are not connected with the health area, such as supermarkets and snack bars. In these locations, the absence of the pharmacist leads to dispensing without criteria and also to non-guidance as to adverse effects, usual dose and routes of administration, since over-the-counter drugs are not exempt from causing adverse and side effects.

It is worth mentioning the importance of awareness of health professionals in reducing the practice of self-medication among the population, through community health education and guidance on the risks and complications of self-medication. It is important

to highlight the need for graduates of health courses, especially those that are in the final stages of undergraduate studies, to assume their role vis-à-vis society, since it is up to these future professionals to guide them towards reducing this practice and consequently reducing the health problems of those who self-medicate.

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