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ORIGINAL ARTICLE

SELF-MEDICATION PRACTICE AMONG NURSING STUDENTS AT A HIGHER EDUCATION INSTITUTION

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ABSTRACT

Objective: To know the prevalence, medications used, and main reasons behind self-medication among nursing students at a higher education institution. **Methods:** Descriptive cross-sectional study, with a quantitative approach and a sample of 126 students enrolled in the nursing undergraduate course of a public institution. Data were collected by applying a structured questionnaire made available on a cell phone app and analyzed using descriptive statistics. **Results:** The students were between 18 and 25 years old (85.7%), women (92.9%), and lived with their relatives (86.5%). A high self-medication rate (99.2%) was found, and the prevailing drug class was pain killers (28.7%), used to obtain quick pain relief (88.1%) and taken according to the students' own knowledge (73.8%). **Conclusion:** The high prevalence of self-medication places these students' health at risk and stresses the need to implement public policies to raise awareness of the rational use of medications.

Keywords: Self-medication. Students, nursing. Drug utilization.

INTRODUCTION

The World Health Organization warns that the indiscriminate use of medications, without defined technical and clinical criteria, is an important public health issue. This situation can cause harm to the population and waste scarce public resources[1].

The inadequate use of medications has several causes, including polypharmacy, the indiscriminate use of antibiotics culture, lack of guidelines oriented toward specific prescribing, inappropriate self-medication, and the commercial availability of a wide range of medications exempt from prescription, which can be readily bought by consumers[2].

In general, self-medication is habitual, common, and used by a high number of people as a way to treat or minimize signs or symptoms of certain health problems, often construed as simple, aiming to cure, minimize, or obtain relief from them[3]. It is characterized as the self-administration of approved and available medications without medical prescription[4].

There are many factors that influence the practice of self-medication, for instance the pharmaceutical industry's advertising power, lack of effective public policies, fast access to information about medicines on the internet, educational deficit, and lack of awareness of the population[5]. It is estimated that 35% of the medications are purchased for the practice of self-medication[6].

It is important to mention that sometimes this practice brings positive results, such as the improvement of symptoms or even the resolution of the health problem. However, it poses risks to health, given that it may hide other diseases, cause intoxication, adverse reactions, the development of resistance, and trigger drug interactions[3,4,7]. According to the Brazilian National Toxicological and Pharmacological Information System, 40% of the intoxication cases in the country result from the use of medications[8].

Self-medication is relatively common not only in the population as a whole, but also among undergraduate students enrolled in courses in the health area, including nursing, pharmacy, and medicine, which makes them a special social group, consisting of people who have information about the medications and their effect on health[9,10].

Medications are an essential resource to cure and control diseases with the final objective of guaranteeing the right to health, provided for by the Brazilian constitution. However, the rational use of medications must be encouraged because

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it aims to promote the responsible use of these drugs, oriented by healthcare professionals, who will prescribe the correct medication at the correct dosage to the right patient and monitor its action and intended therapeutic effect adequately[10]. Nurses play an important role in the application of good practices in medication administration and the education of the population regarding the safe use of medications and the risks associated with them[11].

Considering that nursing students are the future educators of a population that will be assisted by the health system and that their professional activity poses risks to their own well-being, the following guiding question emerged: What are the prevalence and associated factors that lead nursing students to practice self-medication? The objective of the present study was to find out the prevalence, the used medications, and the main reasons behind self-medication among nursing students at a higher education institution.

METHODOLOGY

A cross-sectional study was carried out with students enrolled in the nursing undergraduate course at a public higher education institution located in the city of São Paulo, Brazil.

The examined population was students, 18 years old or older, enrolled in any of the four years of the course. Exclusion criteria were being on sick leave or student exchange program. All the students were invited to answer the questionnaire, made available on the multiplatform app *WhatsApp*®, from September to November 2016. The sample was selected by convenience and the students who accepted to participate in the investigation filled out a structured questionnaire after signing a free and informed consent form.

The questionnaire was designed by the researchers and had two parts. The first contained questions to characterize the students and allowed to gather information on course year, gender, age, who lived with them, use of health services, socioeconomic classification, and whether the person was a quota beneficiary. The question about quota was included in the instrument because of the Brazilian Quota Law (no. 12,711), approved in August 2012, as a public policy of affirmative action in higher education. This legal and mandatory measure determines that Brazilian universities, institutes, and federal centers allocate 50% of their openings for students coming from public schools. Additionally, a specific percentage of the openings is destined for black students (self-declaring to have brown or black skin) and indigenous ones[12]. The Criteria for Economic Classification – Brazil of the Brazilian Association of Research Companies, which include the grades A/B, C, and D/E[13], were used to know the socioeconomic situation of the students.

The second part of the questionnaire had questions related to the practice of self-medication: use of medications without medical prescription; use of medications in the past 15 days; knowledge of the risks involved in using medications without medical prescription; consequences of self-medication; reasons that lead to this practice; factors that influence this practice; name of the medications used; signs and symptoms associated with the use of the medications; medical appointments over the past 12 months; habit of reading the package insert; parts of the package insert read; whether the students provide guidance for other people to practice self-medication; and information on self-medication in the course. The questions were based on publications addressing the subject[5-7,9].

The clarity and pertinence of the questions were assessed by two independent researchers, who indicated adjustments to be performed in the order the answer alternatives were shown. The questionnaire was previously tested by two students who focused their evaluation on the ease to access the app, the interactivity with the instrument, and the time spent to fill it out. Both of them expressed a favorable opinion.

The answers were organized, tabulated, and analyzed using the Excel® software. Descriptive statistics was used to treat data, with the chi-square test having a level of significance equal to 0.05. The prevalence of self-medication was verified by summing the positive answers of the participants. The relative frequencies of the practice of self-medication were determined according to the questions that made up the questionnaire. The Therapeutic National

Formulary[14] was used to classify the medications.

The present study complied with the ethical principles of Resolution no. 466/12 of the Brazilian National Health Council and was approved by the Research Ethics Committee of the Federal University of São Paulo as per report no. 1,528,693 and Certificate of Presentation for Ethical Appreciation no. 55449416.1.0000.5505.

RESULTS

Among the 367 students enrolled in the course, 126 (34.3%) participated in the study. The highest participation percentage was among sophomores (39.7%), followed by freshmen (32.5%), juniors (14.3%), and seniors (13.5%). There was no statistically significant difference between them (p = 0.135).

The participants were mainly women (92.9%), between 18 and 25 years old (85.7%), lived with their relatives (86.5%), were health insurance users (66.7%), were not quota beneficiaries (76.2%), and belonged to grades A/B (68.2%), as shown in Table 1.

Table 1 – Distribution of the answers regarding the characterization of the students

Variables	n (%)
Gender	
Female	117 (92.9)
Male	9 (7.1)
Age (years)	
18 to 25	108 (85.7)
> 25	18 (14.3)
Lives	
With relatives	109 (86.5)
With friends	15 (11.9)
By themselves	2 (1.6)
Health service	
Health insurance	84 (66.7)
Unified Health System	39 (30.9)
Private	1 (0.8)
Health insurance and Unified Health System	2 (1.6)
Quota beneficiary	
Yes	30 (23.8)
No	96 (76.2)
Socioeconomic classification	
Grade A/B	86 (68.2)
Grade C	37 (29.4)
Grade D/E	3 (2.4)

Source: Study data, 2016.

Among the students who filled out the questionnaire, 99.2% practiced self-medication and 94.4% were aware of the risks. In addition, 29 students (23%) reported that they suffered consequences of self-medication, such as the masking of other diseases (11.9%), adverse reactions (10.3%), bacterial resistance (4%), and intoxication (0.8%), with a statistically significant difference between them (p < 0.001).

Table 2 indicates that the attempt to obtain quick pain relief was the prevailing reason behind self-medication (88.1%) and that, according to the students' report, the greatest influence to carry out the practice was their own knowledge (73.8%), with statistically significant differences between them (p < 0.01).

The main therapeutic classes used by the students were non-opioid analgesics and antipyretics (45.1%), non-steroid anti-inflammatory drugs (9.5%), antihistaminic agents (8.2%), and antibiotics (8.2%), with a statistically significant difference between them (p < 0.01). When asked whether they took medications over the previous 15 days, 52% answered affirmatively.

The main symptom that drove the students to practice self-medication was pain (74.6%), followed by inflammation (15.8%), and cold (14.3%). The students were asked if they attended a medical appointment over the past 12 months, and 89.7% answered affirmatively.

The prevalence of the number of students who read the package insert, which is a legal sanitary document, before taking the medications purchased without a medical prescription was 61.9%, with emphasis on the sections related to the indication for use of the medication (86.5%), contraindications (76.2%), and adverse reactions (72.2%). In contrast, 4% of the participants mentioned that they had never read the package insert before taking the medications. When asked about the habit of guiding other people to practice self-medication, 59.5% answered that they did not do that.

Table 2 – Reasons and influences for the practice of self-medication among the students

Variables	n (%)	p**
Reasons that lead to self-medication*		
Attempt to obtain quick pain relief	111 (88.1)	< 0.01
Ease and convenience	67 (53.2)	
Easy access in drugstores	62 (49.2)	
Reading of the package insert	61 (48.4)	
Influences that lead to self-medication*		
Their own knowledge	93 (73.8)	< 0.01
Relatives	86 (68.3)	
Old prescription	38 (30.2)	

Source: Study data, 2016.
*n > 125 because of the possibility of more than one answer
**x^2 test (< 0.05)

The present study showed that 76.2% of the students enrolled in the nursing undergraduate course did not have classes about self-medication in the pharmacology subject, offered in the first term of the second year of the course.

DISCUSSION

The main limitation of the present study was the use of the app *WhatsApp*® as the way to make the questionnaire available. When the study was developed, it was considered that this tool would make it easier to answer the questions, and it was positively evaluated by two students who were digital natives. However, the strategy did not prove attractive, and the authors believe that the high number of questions may help explain it. Although three reminders were sent to the group, assuming that the students could accept participating in the study at different times, the adherence was lower than expected. Another limitation was the use of a non-probability sample, which may cause bias. The results were obtained at a single institution and are not suitable for generalizations.

It was found that the practice of self-medication is highly prevalent among the consulted students and reinforces a conduct adopted by young undergraduate students enrolled in courses in the health area, in Brazil and other countries. Although other studies have reported rates between 16.1% and 33.5%, lower than the one obtained in the present investigation, there is the need to know the reasons that make nursing students to carry out this practice[6,15].

Regarding socioeconomic classification, the most frequent grade in the sample was A/B. It is important to stress that the practice of self-medication is not exclusive to a single class, and the findings of the present study confirm that, corroborating results of other investigations in which the participants belonged to other socioeconomic classes and equally showed a high rate of self-medication[6,16].

Because the sample was made up of undergraduate students who predominantly belonged to the upper-middle class and had health insurance, it could be inferred that they could have more access to health services and more information and that, consequently, the self-medication rate would be lower. However, it was observed that the students showed a high consumption of medications, regardless of the socioeconomic class or the level of access to the health system, a behavior similar to the Brazilian population's one[17]. The present study examined a privileged social class, but new studies addressing the insertion of medicines in social groups in different social classes and their

vulnerability potential regarding the conscious decision of taking medications can be useful to guide the elaboration of policies that encourage self-care more intensively[10].

It was identified that the students had knowledge about the use of medications, which pointed to a higher confidence to carry out the practice of self-medication, explained by their being enrolled in a course in the health area and obtaining knowledge about the drugs and concepts about health, as well as attributing value to the medications other than that of stopping health problems[10].

However, the participants declared that they performed self-medication to obtain quick pain relief, a piece of information that brings an important hint to know the reasons why this symptom manifests itself. The context imposed by the course, which is full-time (eight hours of activities per day) and on-site, and involves academic demands, clinical practice, and supervised internships since its second year, brings about situations that lead to tension, stress, and sleep deprivation, factors that compromise the quality of life of the students[4,16].

Additionally, the relatives influenced the practice of self-medication, providing guidance on which medications the students should take. This type of influence is common in Brazil and reflects the habit of practicing self-medication that these people also have, motivated by their having the medications at home, making the most of old prescriptions, finding the practice convenient, or even feeling anguish and worrying when they see their young relative having an undesirable symptom[4,18].

It is noteworthy that most students declared that they did not influence other people to carry out the practice of self-medication, a result that differs from the finding reported in other studies that showed that undergraduate students enrolled in courses in the health area have the habit of guiding other people toward self-medication, a circumstance that may be related to their own training, self-confidence, and a true interest in contributing to the well-being of those close to them[11].

The main class of medications that the participants declared to use was pain killers. This fact occurs because of the easy access to this type of medication in drugstores, with this route being a common way to obtain the drugs. Although it is considered convenient, it can increase the risk of unintended associations, especially with alcohol and drugs, making people more vulnerable to health incidents[10,16].

It is worrying that the participants have reported that they take antibiotics without medical prescription, given that it is known that this type of medication can lead to drug interactions and increase bacterial resistance and, consequently, make superinfections more likely[3]. Similar results were obtained with students at a medical school, who showed a high prevalence in the use of pain killers and reported that they took antibiotics[19]. Although the Board of Directors Resolution provides guidance on antimicrobial medications, a category that includes antibiotics, warning that they cannot be sold without medical prescription and that the prescription duplicate must be kept by the facility, the irregular practice remains in Brazil. This finding points to the need to promote educational actions to make people aware of the importance of neither keeping spare antibiotics at home nor using this type of medication without a medical prescription[2,20].

The examined population has the habit of consulting their physicians, an occasion that could be used by these professionals to offer guidance on self-medication to this specific public, even if many students consider that seeking help is a "waste of time" and, consequently, practice self-medication[19]. A study that addressed aspects of self-care alerted that autonomy is a right of every living being, but it does not exempt people from the need to go through an educational process oriented toward the rational use of medications[10].

Most of the participants who resorted to self-medication mentioned that they read the package insert of the medications before taking them. Because it is the source of different types of information, it also contributes to the practice of self-medication among nursing students. Package inserts are a legal document, made available in versions for patients and professionals, and aims to provide explanations to guarantee an effective and safe therapy[4].

Although the nursing undergraduate course has a pharmacology subject, the students

reported that they did not receive specific guidance on self-medication. Reviewing the subject's contents could be a way to increase the students' awareness of the practice, warning about the risks and contributing to making students more conscious of the safest options regarding their health[11].

CONCLUSION

The present study showed that the prevalence of the practice of self-medication among nursing students is high and that the most used medication belonged to the pain killers category and was taken to obtain quick pain relief. These results point to the need to implement policies designed to guide and raise awareness of this population throughout their training process.

PRÁTICA DA AUTOMEDICAÇÃO ENTRE ESTUDANTES DE ENFERMAGEM DE INSTITUIÇÃO DE ENSINO SUPERIOR

RESUMO

Objetivo: conhecer a prevalência, os medicamentos utilizados e os principais motivos da automedicação entre os discentes de um curso de enfermagem em uma instituição de ensino superior. **Método**: estudo transversal descritivo, de abordagem quantitativa, com amostra de 126 estudantes matriculados no curso de graduação em enfermagem de instituição pública. A coleta de dados foi realizada por meio de um questionário estruturado disponibilizado por aplicativo e foram analisados por estatística descritiva. **Resultados**: os estudantes tinham entre 18 e 25 anos de idade (85,7%), a maioria do sexo feminino (92,9%) e moravam com familiares (86,5%). Observou-se um alto índice de automedicação (99,2%), e a classe medicamentosa prevalente foi a dos analgésicos (28,7%) utilizados para alívio rápido da dor (88,1%) e levados à utilização pelo próprio conhecimento (73,8%). **Conclusão**: a alta prevalência de automedicação coloca em risco a saúde dos estudantes e reforça a necessidade de implementação de políticas públicas para a conscientização sobre o uso racional de medicamentos.

Palavras-chave: Automedicação. Estudantes de enfermagem. Uso de medicamentos.

PRÁCTICA DE LA AUTOMEDICACIÓN ENTRE ESTUDIANTES DE ENFERMERÍA DE INSTITUCIÓN DE ENSEÑANZA SUPERIOR

RESUMEN

Objetivo: conocer la prevalencia, los medicamentos utilizados y los principales motivos de la automedicación entre los discentes de un curso de enfermería en una institución de enseñanza superior. **Método**: estudio transversal descriptivo, de abordaje cuantitativo, con amuestra de 126 estudiantes inscriptos en el curso de pregrado en enfermería de institución pública. La recolección de datos fue realizada por medio de un cuestionario estructurado disponible en una aplicación (app) y fueron analizados por estadística descriptiva. **Resultados**: los estudiantes tenían entre 18 y 25 años de edad (85,7%), la mayoría del sexo femenino (92,9%) y vivían con familiares (86,5%). Se observó un alto índice de automedicación (99,2%), y la clase medicamentosa prevalente fue la de los analgésicos (28,7%) utilizados para el alivio rápido del dolor (88,1%) y llevados a la utilización por el propio conocimiento (73,8%). **Conclusión**: la alta prevalencia de automedicación pone en riesgo la salud de los estudiantes y refuerza la necesidad de la implementación de políticas públicas para la concienciación sobre el uso racional de medicamentos.

Palabras clave: Automedicación. Estudiantes de enfermería. Uso de medicamentos..

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