

ORIGINAL ARTICLE

SELF-MEDICATION AMONG SECONDARY SCHOOL STUDENTS

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ABSTRACT

Objective: To gather data about the prevalence, drug classes, and main reasons for self-medication among secondary school students.

Method: This was a descriptive cross-sectional study with 130 students from a state school in the municipality of São Paulo. Descriptive statistics, parametric, and nonparametric tests were used to analyze the data.

Results: Students were between 13 and 20 years old, 91 (70%) were female and 112 (86.2%) practiced self-medication. Of these, 75 (67%) used medication for pain relief, 18 (16.1%) reported adverse reactions, and the most predominant drug class was pain relief medications, with 147 (59.2) mentions. Easy access to these products in drugstores was the main reason given by 49 (43.7%) participants.

Conclusion: Education is important to deliver information to students and family members to discourage self-medication among this segment of the population.


DESCRIPTORS: Self-medication; Students; Education, Primary and Secondary; Medication Utilization; Health Education.

HOW TO REFERENCE THIS ARTICLE:


Santos ESP dos, Andrade CM, Bohomol E. Self-medication among secondary school students. *Cogitare enferm.* [Internet]. 2019 [access "insert day, month and year"]; 24. Available at: <http://dx.doi.org/10.5380/ce.v24i0.61324>.



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PRÁTICA DA AUTOMEDICAÇÃO ENTRE ESTUDANTES DE ENSINO MÉDIO

RESUMO

Objetivo: conhecer a prevalência, classes medicamentosas e principais motivos para a prática da automedicação entre os estudantes de ensino médio.

Método: estudo transversal descritivo, com 130 estudantes de uma escola estadual do município de São Paulo. Utilizou-se estatística descritiva, testes paramétricos e não paramétricos para análise de dados.

Resultados: as estudantes apresentaram idade entre 14 e 20 anos, 91 (70%) eram do sexo feminino e 112 (86,2%) praticaram a automedicação. Destes, 75 (67%) utilizaram para alívio de dores, 18 (16,1%) referiram ter tido reações adversas e a classe medicamentosa predominante foi a dos analgésicos com 147 (59,2%) menções. O fácil acesso do produto nas farmácias foi o principal motivo apontado por 49 (43,7%) participantes.

Conclusão: destaca-se a importância da educação como meio de levar informações aos estudantes e familiares, visando desestimular a prática da automedicação nesta faixa populacional.

DESCRITORES: Automedicação; Estudantes; Ensino Fundamental e Médio; Uso de Medicamentos; Educação em Saúde.

PRÁCTICA DE LA AUTOMEDICACIÓN ENTRE ESTUDIANTES DE ENSEÑANZA MEDIA

RESUMEN

Objetivo: Conocer la prevalencia, las clases medicamentosas y los principales motivos para la práctica de la automedicación entre estudiantes de enseñanza media.

Método: Estudio transversal, descriptivo, realizado con 130 estudiantes de una escuela estatal del municipio de São Paulo. Se utilizó estadística descriptiva, tests paramétricos y no paramétricos para el análisis de datos.

Resultados: Los estudiantes tenían edad de entre 14 y 20 años; 91 (70% eran de sexo femenino; 112 (86,2%) refirieron automedicarse. De ellos, 75 (67%) utilizaron medicación para aliviar dolor, 18 (16,1%) informaron haber sufrido reacciones adversas. La clase medicamentosa predominante fue la de analgésicos, con 147 (59,2%) menciones. El fácil acceso al producto en farmacias fue el principal motivo expresado por 49 (43,7%) participantes.

Conclusión: Se resalta la importancia de la educación como factor para difundir información entre estudiantes y familiares, apuntando a disminuir la práctica de la automedicación en esta faja poblacional.

DESCRIPTORES: Automedicación; Estudiantes; Educación Primaria y Secundaria; Utilización de Medicamentos; Educación en Salud.

INTRODUCTION

Self-medication is the use of medication of one's own accord or recommended by people who are not trained to treat illness or symptoms, regardless of medical prescription or advice⁽¹⁾. It is a common practice and has been discussed worldwide, including in Brazil, with approximately 80 million people who self-medicate⁽²⁾.

Many prescribed medications are dispensed or sold inadequately, and a great portion of the world population lack access to essential medication and across the globe, while a considerable number of patients take medications incorrectly, against the recommendations of the World Health Organization regarding the rational use of medicines (RUM). Rational use requires that individuals receive medications appropriate to their clinical needs, considering their own individual requirements, for an adequate period of time and appropriate dose, and at the lowest cost to them and their community⁽³⁾.

In Brazil, the National Health Regulatory Agency (ANVISA) has regulations for selling and advertising products that may be purchased without a medical prescription. However, self-medication is a complex phenomenon, because it includes barriers of access to the basic healthcare network, lack of information about products, the need to provide symptomatic relief, ease of access in drugstores, sharing medication with family members or friends, and advertisements that maximize the benefits and downplay the negative effects and other risks related to medications. These are some of the reasons that lead people to self-medication⁽⁴⁻⁵⁾.

Although the goal of self-medication is to achieve physical and mental well-being, it can result in unwanted outcomes, such as increased resistance to bacteria, hemorrhages, allergies, intoxication, iatrogenic illnesses, adverse reactions, and masking disease⁽⁶⁾. Studies have shown that this practice is adopted by different strata of society, age groups, and education levels. Thus, health education must be the driving strategy to promote RMU and enable citizens to establish a more conscientious relationship with the use of medication⁽⁷⁾.

There are few studies that address self-medication in adolescence, a crucial stage of human development, in which youths are more susceptible and vulnerable to risk behaviors, experience great physical, biological, emotional, hormonal, and social transformations, which require special attention from health and educational authorities in terms of health preservation⁽⁸⁻¹⁰⁾.

Furthermore, factors such as the need to escape reality, stave off angst, low tolerance to suffering, and the glorification of fleeting pleasure can make people look for unrealistic measures in the publicized drugs, most of the time subliminally, through advertising⁽¹¹⁾. Self-medication among adolescents is a concrete and alarming issue that requires health policies that can help in the development of damage prevention measures and healthy habits^(1,12).

The aim of the present study was to gather data about the prevalence, drug classes, and main reasons behind self-medication among secondary school students.

METHOD

This was a quantitative cross-sectional descriptive study with 450 students enrolled in all three grades of a state secondary school in the municipality of São Paulo. Probabilistic convenience sampling was used according to the following inclusion criteria: students enrolled and attending the curricular matrix during the data collection period.

The research team visited all the grades that composed the secondary school to explain the objectives of the survey and the ethical precepts, and then invited students to participate. The researchers also participated in the parent-teacher association meetings

to present the project. At these meetings, parents were asked to sign informed consent forms. Participants under the age of 18 who agreed to participate signed the informed consent form only after permission was granted from their parents. Participants 18 years old or older were asked to sign the informed consent form.

Participants were given a two-part semi-structured questionnaire to complete. The first part contained six questions with personal information, and the second, 11 questions about self-medication practices. The data were collected between February and April 2017.

The data were consolidated on an Excel spreadsheet and descriptive statistics was employed, with means and standard deviations used for analysis. Furthermore, the chi-squared nonparametric test, Student's t parametric test, and analysis of variance (ANOVA) were applied to compare and test associations between the variables. In all, 259 questionnaires were administered and 157 were returned, of which 27 were excluded because of lack of parent permission, resulting in a final sample of 130 (28.9%) individuals.

The study was approved by the Research Ethics Committee of the Federal University of São Paulo, as per resolution no. 0035.0035.01/2017.

RESULTS

The sample consisted of 130 students between the ages of 14 and 20 years old, mean age of 16.5 years (SD \pm 0.5), with 122 (93.8%) minors under the age of 18. Ninety-one (70%) were female and 39 (30%) were male, with no significant differences in age between genders ($p=0.3115$). In terms of grade level, 58 (44.7%) were in year 1, 50 (38.4%) were in year 2, and 22 (16.9%) in year 3. Considering living situation, 126 (96.9%) lived with their parents and 39 (30.9%) resided in a one-parent family, headed by mothers.

Regarding the level of education of the head of the family, 31 (23.8%) had a higher education degree and 20 (15.4%) had a secondary education degree. Moreover, 62 (47.7%) of the participants mentioned having private health insurance and 60 (46.2%) used the Brazilian Unified Health System, with no significant difference ($p=0.3097$).

Considering self-medication, 112 (86.2%) reported adopting this practice, with a statistically significant predominance among female students ($p<0.00001$). However, no association was found between this practice and grade ($p=0.0535$) nor with type of access to the healthcare system ($p=0.6916$).

When asked about the consequences of self-medication, 85 (75.9%) students said they had never felt any; however, 18 (16.1%) had experienced adverse reactions, and four (3.6%) had developed antibiotic resistance.

The participants were asked for the names of the medications they took and 90 (80.4%) identified the brand names. Of these, 28 (31.1%) mentioned one name; 24 (26.6%), two names; 19 (21.1%), three names, and two (2.3%) students mentioned seven medications. The predominant drug class was pain relief medication, with 147 (59.2%) mentions, followed by muscle relaxants, 33 (13.3%), and antispasmodics, 25 (10.1%), as shown in Table 1.

Table 1 - Drug class used by students when self-medicating. São Paulo, São Paulo, Brazil, 2017 (continues)

Class	n	%
Pain relief medication	147	59.2
Muscle relaxants	33	13.3

Antispasmodics	25	10.1
Antihistamines	8	3.2
Antimicrobials	7	2.8
Antiasthmatics	4	1.6
Others	24	9.7
Total	248	100

Note: n>112 because more than one answer was possible.

In terms of time of recall, 46 (41.4%) mentioned having used medications in the last 15 days and when asked about the purpose of medication use, 75 (67%) students mentioned pain relief and 29 (38.6%) referred specifically to headaches.

Table 2 includes the main reasons for students self-medicating, such as easy access to product in drugstores, mentioned by 49 (43.7%) participants, and the attempt to quickly and immediately relieve pain, mentioned by 39 (34.9%). The students were asked how often they read the package insert before using the medication and 55 (49.1%) said "sometimes" and 25 (22.3%), "never".

Table 2 - Reasons for self-medication São Paulo, São Paulo, Brazil, 2017

Reasons	n	%
Easy access at drugstore	49	43.7
Quick and immediate attempt at pain relief	39	34.9
Practicality and commodity	13	11.6
Self-confidence	7	6.2
Read package insert	2	1.8
Trust their source of information	1	0.9
Lack of time to go to the doctor	1	0.9
Total	112	100

Considering intervening factors in self-medication, mothers were mentioned as the main reason that influenced this practice by 39 (34.8%) students, followed by advice from drugstore clerks, with 25 (22.2%) mentions, as shown in Table 3.

Table 3 - Intervening factors in self-medication São Paulo, São Paulo, Brazil, 2017 (continues)

Factors	n	%
Mother	39	34.8
Drugstore clerk	25	22.2

Own knowledge	18	16.1
Old prescription	12	10.7
Advertising	8	7.4
Friends	7	6.2
Family members	3	2.6
Total	112	100

Of the students who practiced self-medication, 80 (71.4) had gone to a medical appointment in the last 12 months, and 64 (57.1%) did not provide advice or suggestions to other people about what medications to take.

DISCUSSION

In the present study, the results confirm the high prevalence of self-medication among adolescents, corroborating other studies that address the topic among this age group, also showing a high prevalence of over-the-counter drug use^(1,13).

The study was carried out at a public school and on analyzing studies about self-medication with private and public school students, the conclusions suggest no differences between the types of schools, confirming that it is a real and worrisome practice regardless of the school system⁽¹⁾.

In the studied sample, self-medication was predominant among female adolescents. In corroboration with this finding, another study about the topic with different age groups showed that women also self-medicated more⁽¹²⁾.

The findings about education level of the head of the house are in line with those of a study about self-medication among secondary school students⁽¹²⁾. However, these results do not show the extent to which people with higher education levels influence in establishing the healthy habits of youths, in order to promote self-medication interventions and prevention strategies. However, it is known that people of all education levels self-medicate, and therefore, it is an easy example to be followed by members of the nuclear family^(6,14).

Regarding type of healthcare service used, no significant difference was found between forms of access, in contrast with data from a Brazilian study that affirmed that socioeconomic conditions can influence the decision to self-medicate⁽¹²⁾.

In terms of the types of consequences of self-medication, most students reported having experienced none, and some had experienced some adverse drug reaction and developed antibiotic resistance. In comparison with a study conducted mostly with adolescents from a school in Minas Gerais, 178 (95.2%) participants reported no reaction. Even though the number of adverse reactions mentioned by the participants was relatively low, the authors indicate that 97 (51.9%) did not know whether the medications they had used could cause any problems, thus highlighting their lack of knowledge about adverse drug reactions⁽¹⁾.

However, the more medications are taken at once, the higher the risk for drug interaction, as reported by students in the present study, who for the most part used more than one type. Furthermore, there is also the risk of adverse effects due to drug interaction, because no pharmacologically active substance is harmless to the organism. Some adverse

reactions include serious or lethal consequences in the case of stronger drugs, such as anticoagulants; the loss of effectiveness, such as in the case of corticosteroids; and antibiotic resistance, as is the case of antibiotics^(13,15).

Thus, special attention is necessary to the topic of self-medication among this population. Adolescence is a phase of change and many individuals can present risk behaviors, such as the use of alcohol and drugs, which associated with the use of medications, such as psychostimulant drugs, make teens more vulnerable to health problems⁽¹⁶⁾.

Pain relief medication was the main drug class reported, followed by muscle relaxants and antispasmodics. These findings are in line with studies about self-medication, in which pain relief medication predominated^(2,6,13), followed by muscle relaxants⁽¹³⁾.

The participants reported that the reason for using medications was pain relief, and this symptom can be related to environmental factors such as tension, stress or physical demands, impacting these youths' quality of life. Furthermore, the results may have been influenced by the fact that the sample consisted mainly of women and adolescents, who seek pain killers, muscle relaxants, and antispasmodics to relieve menstrual cramps⁽¹⁾.

However, other studies suggest that it is necessary to reflect on pain and to think about its origin in each individual. Pain can be intimately related to a person's subjectivity, and consequently, cannot be associated merely with the search for intellectual and information-based solutions for organic discomfort⁽¹¹⁾. The abusive use of pain relief medication can cause gastrointestinal disorders, allergic reactions, and renal effects, in addition to the chronification of headaches, one of the main reasons mentioned for taking this type of medication^(2,13).

In terms of the variables "drug class" and "reason for use", further studies are needed about the elevated use of pain relief medications among youths, because these medications are easily found in their homes and are accessible at drugstores. Although they are over-the-counter drugs, studies with adolescents show that the frequent use of pain relief drugs, alcohol, and tobacco as a way of coping with problems in the areas of leisure, recreation and social competence, which can serve as a gateway for other drugs⁽¹⁰⁾.

Easy access in drugstores was the main reason given for self-medication in this study, showing that the professionals who work in this type of facility, especially pharmacists, have an important role in providing guidance about the use of drugs in terms of allergic reactions, adverse and side effects; drug interactions, such as with alcohol and drugs; providing advice and answering questions about the information contained on the package insert, even when these drugs are considered relatively safe. Pharmaceutical care is an important strategy for rational medicine use, because there is a lack of information among all segments of the population⁽¹⁷⁾.

In the present study, mothers were mentioned as the main persons responsible for guiding self-medication practices. Studies present numerous justifications for mothers suggesting self-medication for their children, among them the habit of self-medicating themselves; taking advantage of previous prescriptions; advice received from pharmacists; practicality; symptom relief; and anguish or concern when seeing their child with an undesirable symptom. However, this practice within the family environment can influence the attitude of adolescents about their health care and the use of self-medication^(2,4,10).

Furthermore, most youths had been to a medical appointment in the 12 months prior to the study, showing that they do care for their health, in contrast to a study that showed difficulties in accessing medical services as the main prerogative for self-medication⁽¹²⁾.

The education of students is essential to establish a conscientious relationship with medications, encourage self-care as a form of preventing diseases, and promote health and quality of life⁽⁷⁾. The Health at School Program of the Ministry of Health Strategies includes actions to promote access to healthcare services, comprehensiveness of care, coordinated health and education policies, reinforcing the importance of providing the

school community with health promotion actions⁽¹⁸⁾.

Moreover, it is important that adolescents receive professional attention, whether in the medical, nursing or pharmaceutical fields, including information about medications, their benefits and negative effects, not only of those prescribed, but also of those used on occasion, promoting knowledge that stimulates conscientious use among the population.

A study conducted with members of a multiprofessional team showed the need to promote specific actions to reach this young population in primary care, because even though there are several programs, their reach is limited due to discontinuity of work, absence of support networks, inconvenient consultation times, and difficulties in winning over adolescents. Therefore, integrating health and education is an important strategy to expand adolescent health care beyond healthcare institutions⁽¹⁹⁾.

Some limitations of the study include the possibility of biases in the questionnaire that cannot always be controlled, such as the understanding of adolescents of drug interactions, or the time of recall, for example. Furthermore, the use of a nonprobabilistic sample may have resulted in biased answers. Therefore, the studied sample represents data from a single institution and cannot be generalized.

However, the topic can serve as an object of further research that relates self-medication with symptoms of stress, alcohol and drug use, in addition to contributing to analyzing the results of improved health associated with the Health at School Program aimed at this population.

CONCLUSION

The results of this study indicate a high prevalence of self-medication among adolescents. The most commonly used drug classes were pain relief medication, muscle relaxants, and antispasmodics. The main reasons for self-medication mentioned by students were easy access to products at drugstores and the attempt to achieve quick and immediate pain relief.

These findings highlight the importance of multiprofessional care in consultations with physicians, nurses or pharmacists, with information regarding medication, their benefits and risks, thus discouraging this practice among this age group.

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Received: 02/09/2018

Finalized: 17/06/2019

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