## Research Article

# SELF-MEDICATION PRACTICE IN DENTAL TREATMENT

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### ARTICLE INFO

### ABSTRACT

Self-medication is a common practice in many developing countries, but little is known about its determining factors. These factors influencing adherence to self-medication familiarity with medications, previous positive experiences and difficult access to health services such as dental care. The objective of this research was to evaluate the prevalence and variables associated with the practice of self-medication in patients who are in dental care. Eighteen one patients were interviewed at the Faculty of Dentistry in Paulista University and asked about the use of self-medication in the last 30 days, being 78% self-medicated and 27.3% used analgesics. Females had 74% more chance to practices self-medication than men (0,08-0,81 IC95%), independent of age and education level, and this is probably due to greater exposure to medication in all stages of life. In addition, indiscriminate use of medications may lead to undesirable adverse effects, as well as drug interactions. It is essential campaigns against the use of medications directed to health professionals as well as the general population.

## INTRODUCTION

Self-medication is an increasingly important problem with considerable clinical, economic, ethical and sociocultural implications, raising important issues related to the rational use of medicines, health education and individual and collective rights[1]. Currently, there is a trend in many Western countries to change the norms of medicines that require medical prescription to be released without prescription, including in Brazil through the new antimicrobial prescription rule[2,14].

The action of self-medication is a phenomenon potentially harmful to individual and collective health, since no medication is harmless to health, and the inappropriate use of substances and even drugs considered simple by the population, such as over-the-counter drugs such as painkillers, may have as a consequence reactions of hypersensitivity, bacterial resistance, drug dependence without real precision and even digestive hemorrhages[3,14,15].

Familiarity with medications, previous positive experiences and difficulty in accessing health services, such as dental care, are factors that influence the adherence of self-medication. In addition, what strengthens this practice seems to be the strategies of promotion and publicity of drugs that are exposed to the population, which is excessively exposed to it, without having due clarification about the risks associated with its use [4,5].

Therefore the practice of self-medication has become a form of health care and even health academics are exposed to this habit. Also important is the evaluation of the behavior of future health professionals regarding the use of drugs, particularly the practice of self-medication, since they should be responsible for the orientation and education of patients and the population regarding the correct use of medicines[5].

In addition, the literature lacks scientific papers relating the practice of self-medication in dentistry, although patients in dental care are constantly exposed to procedures that involve infectious conditions, as well as the control of inflammatory process and pain. Therefore, the purpose of this study is to evaluate the prevalence and variables associated with the practice of self-medication in patients who are in dental care.

## METHODS

This cross-sectional study was carried out at the School of Dentistry of the Paulista University (FOUNIP) in São Paulo, beginning after approval by the Research Ethics Committee of UNIP - SP, (no. 643/09 CEP / ICS / UNIP). from February to October 2010. The sample consisted of 81 patients from the

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FOUNIP dentistry clinic. A sample calculation was performed considering 80% test power and alpha level of 5%, a total of 76 individuals would be necessary.

The information was collected a questionnaire of their own that contained questions regarding the use of medications without medical prescription, active principle used, reasons that led to self-medication in the last 30 days before the collection. The patients invited to the research were in dental care at FOUNIP in the discipline of integrated clinic and had as criteria of inclusion minimum age of 18 years, in dental care, filling the consent term, being excluded from the study patient in psychiatric care , drug addiction and hypochondriac. For the accomplishment of a Poisson logistic regression the patients were divided according to age in two groups up to 40 years (Group I) and over 41 years (Group II). As for the educational level, they were divided in up to 8 years of study (Group I) and over 8 years of study (Group II).

Self-medication was considered in relation to self-reported medications, indicated by relatives, friends, pharmacy clerk, or anyone not qualified to prescribe. The collected data were stored in a spreadsheet in the Excel program and statistical analysis was performed in the Bioestat 5.0 program through a Poisson regression with a 95% confidence interval (CI).
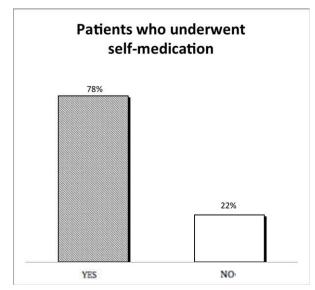
## RESULTS

Of the 81 patients interviewed the mean age was 43.5 ± 11.2 years, the demographic data were described in Table 1, and data such as age and level of education were divided into two groups for performing multiple logistic regression.

**Table 1** Demographic data of subjects included in the study

| Characteristics Sociodemographic | Prevalence | |
|---|---|---|
| | n | % |
| **Genre** | | |
| Male | 34 | 42 |
| Female | 47 | 58 |
| **Age Group** | | |
| Grupo I- 18 to 40 years | 30 | 37,1 |
| Grupo II - 41 years and over | 51 | 62,9 |
| **Ethnic Group** | | |
| Leucoderma | 46 | 57 |
| Melanoderma | 34 | 42 |
| Xantoderma | 1 | 1 |
| **Degree of Education** | | |
| Up to 8 years of study | 41 | 50,6 |
| More than 8 years of study* | 38 | 46,9 |
| Uneducated | 2 | 2,5 |

* Included in this group were interviewed with high school education, higher education, post graduation

Of the total sample, 63 patients (78%) reported self-medication (Graph 1), mainly for headaches (23%), muscle pain (18%), joint pain (8%) and fever (15%) (Table 2). The most commonly used classes of drugs were analgesics (27.3%), followed by antipyretics (21.2%) (Table 3), with sodium dipyrone being the most used active ingredient in these classes. In addition, twenty-three patients (10.1%) reported antimicrobial use (Table 3). Of the patients who performed self-medication, they reported that this act occurred sporadically, mainly for headache.



**Graph 1** Patients self-medicated

**Table 2** Reasons related by the interviewees for self-medication

| Reasons | Prevalence | |
|---|---|---|
| | n | % |
| Ache | 118 | 49 |
| Fever | 36 | 15 |
| Emotional problems* | 21 | 8,7 |
| Cold | 15 | 6,2 |
| Endocrine | 10 | 4,1 |
| Problems** | 41 | 17 |
| Others** | | |
| Total | 241 | 100 |

\* Grouped depression, anxiety, sadness, insomnia.
\*\* Grouped weight loss and muscle gain.
\*\*\* Grouped allergy, colic, diarrhea, verminose, fatigue, gastritis.

**Table 3** Medications most used by respondents in the last 30 days

| Medication | Prevalence | |
|---|---|---|
| | n | % |
| Analgesic | 62 | 27,3 |
| Antipyretic | 48 | 21,2 |
| NSAIDs | 38 | 16,8 |
| Antimicrobial | 23 | 10,1 |
| Antacid | 17 | 7,5 |
| Muscle Relaxant | 16 | 7 |
| Vitamins | 13 | 5,7 |
| Others* | 10 | 4,4 |
| Total | 227 | 100 |

\* Grouped sex hormone, other hormones, expectorant, phytotherapics.

**Table 4** Multiple Logistic Regression of variables associated with self-medication.

| | Groups | ODDS Ratio | IC 95% | p |
|---|---|---|---|---|
| **Genre** | Female Male | 0,26 | 0,08 a 0,81 | 0,02 |
| **Age** | ≤ 40 years > 40 years | 0,36 | 0,70 a 6,91 | 0,18 |
| **Instruction level** | Up to 8 years > 8 years | 0,81 | 0,24 a 2,73 | 0,73 |

Multiple logistic regression showed that women were 74% more likely to self-medicate than men (0.08-0.81 CI 95%), regardless of age and education level (Table 4).

## DISCUSSION

Economic, political and cultural factors have contributed to the growth and spread of self-medication in the world, making it a public health problem. Population-based epidemiological studies reveal the prevalence of self-medication and its associated factors in non-selected populations. The prevalence and factors associated with self-medication have been widely studied in developed countries[6,7].

In the present study, the use of self-medication in the last 30 days was evaluated, and 78% of the sample were self-medicated. This result is in accordance with the study of Aquino *et al.* 2010, where 65.5% of the respondents confirmed their use, and also according to studies conducted in the south of Brazil [5,8].

Women were 74% more likely to self-medicate than men, regardless of age and level of education, probably due to increased exposure to medication at all stages of life, increased demand for medical care, as well as prevention campaigns aimed at this public.[5]

As in the study by Aquino *et al.*[5], analgesics led the preference of the interviewees (27.3%). In addition, two previous studies by Arrais *et al.*[9] and Bertoldi *et al.*[4] presented respectively 21.6% and 26.6%. The second most used drug in the present study was antipyretic drugs by 21.2% of the interviewees, followed by anti-inflammatory drugs by 16.8% of the interviewees. The practice of self-medication can mask serious illness, with consequent delays in diagnosis or impairment in the medical follow-up of potentially serious situations. Inadequate use of medications by some patients, particularly elderly patients or those with significant cognitive deficits, as well as the interaction between prescribed and non-prescribed drugs are facts to be considered[1,11].

Self-medication is a common practice in many developing countries, but little is known about its determinants that led to this practice. A studyanalyzed the factors that were associated with the use of self-medication in Mexico in adults 50 years of age or over, verifying that self-medication could be related to characterization socioeconomic status and lack of access to professional health care[10].

When the reason for self-medication was evaluated, the present study presented pain as the main reason (49%), mainly headache, muscle and joint pain, followed by fever in 15% of the cases. In the present study, the pain picture was more prevalent than in the studies by Arrais *et al.*[9] presented half (24.2%) and Aquino *et al.*[5] with 30.5%, and this result can be explained by the fact that patients are in dental care and consequently more susceptible to pain and consequently to a greater number of self-medication related to the use of analgesics (27.3%).

According to Musial *et al.*[3] there is no way to eliminate self-medication from society, but there are ways to minimize it; with orientation programs for health professionals and the population in general; incentive programs for the search of the medical professional and development of public policies for the adequacy of structure and human resources in all health units, incentives for appropriate supervision, promotion of advertising and the sale of non-prescription medicines are fundamental for minimizing practice of self-medication and the harm it causes.

Although according to RDC 44/2010[2] the prescription of antimicrobials must be carried out through a special control prescription, due to the research being carried out prior to the implementation of this resolution, 10% of the interviewees used antimicrobials without the prescription of a qualified professional. The indiscriminate use of antimicrobials may lead to antimicrobial resistance, and consequently the development of opportunistic infections and undesirable systemic effects, such as hypersensitivity and gastrointestinal reactions, which may limit clinical use[12]. Due to such adverse effects, researchers are looking for an adjuvant therapy that can promote similar benefits to antimicrobial therapies, with fewer side effects, where photodynamic therapy is an example[13].

Therefore, it is the role of the health professional, as well as the class entities and federal councils, to guide and publicize campaigns to combat self-medication and the indiscriminate use of drugs, preventing drug interactions and adverse effects.

## CONCLUSION

Self-medication is a public health problem and in the present study performed with patients in dental care the female gender self-medicated 74% more than the male gender, regardless of age and education level. In addition, analgesics (27.3%) led the interviewees' preference. However, the indiscriminate use of medications can lead to undesirable adverse effects, as well as, drug interactions. It is of fundamental importance campaigns to combat the use of medicines aimed at health professionals and also the population in general.

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