



The risks of self-medication

10.56238/isevmjv1n1-010

Receipt of originals: 02/01/2022

Acceptance for publication: 16/01/2022

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ABSTRACT

Drugs have marked a great revolution in public health activities, being most often used as the first option in current therapy. However, the stimulus of the media and the ease of acquisition ended up making their use routine, thus generating accumulation of these products in homes, and consequently self-medication. Because there is a need to promote the education of the population in relation to the rational use of medications, showing the risks of self-medication, the present study was carried out. The main objective of this study was to present a literature review on home pharmacy and the risks of self-medication. For this, a search in the national and international literature was carried out through the Scielo, Lilacs and MEDLINE/PubMed databases. It was emphasized that home pharmacy is very common in most homes, and that the practice of self-medication is very frequent, this is due to the easy access to medicines, in addition to the popular culture of obtaining, through natural means, a medicine, such as plant extracts. The benefits brought by making the population aware of the rational use of medicines, as well as the correct way to store them, promotes the improvement of health, thus reducing the risks of drug poisoning, in addition to the other risks that self-medication exposes the population. This attribution highlights the significant work of the pharmacist professional, as he is the holder of knowledge, who dispenses medicines and provides guidance to the patient.

Keywords: Medications, Self-medication, Home Pharmacy.

INTRODUCTION

The practice of self-medication and the storage of medicines at home is far known among the Brazilian population. According to Calainho (2005), in colonial Brazil, the scarcity of doctors and medicines from Portugal and the East mainly forced the Jesuits to turn to the natural resources offered by the land, and to the healing knowledge of the indigenous people.

Knowledge about the active principles of plants has been transmitted and catalogued for numerous generations. The use of plants as medicine is probably as old as the appearance of man himself, which only happened about 50 thousand years ago. The search for a cure or alleviation of momentary suffering is inherent to man and a constant challenge. We know that alchemists, in their attempt to discover the "elixir of long life", contributed greatly to the evolution of the art of healing (SOARES, 2002).

Medicines marked a great revolution in public health activities, obtaining a place of evidence, being most often used as the first option in contemporary therapy (NASCIMENTO,



2005). Due to the stimulus of the media and the ease of obtaining medicines, the indiscriminate use of these products has become very common, causing the population to accumulate these products in their homes, thus constituting the home pharmacy (FERNANDES & PETROVICK, 2004).

In Brazil, there is an increase in the pattern of drug consumption by the population, which often leads to incorrect or unnecessary use, resulting in serious consequences such as unwanted side effects, allergic reactions, and intoxication. These manifestations are rarely known by the patient and when he does not use all the medication purchased, he stores it in home pharmacies to use them later (DALQUANO et al., 2008, apud SOUZA et al., 2008).

The home pharmacy, constantly stored in inadequate environments, provides several possibilities for irrational consumption and waste, including the facilitation of non-responsible self-medication, as well as the increased risk of unintentional and intentional toxic exposures (TOURINHO et al., 2008).

Self-medication in Brazil stands out as a result of the crisis in the health sector. By contradiction, self-medication also increases the risk of drug interactions, which can reduce the therapeutic effect or increase the toxicity of the drug, inducing serious health problems (MONTEIRO, 2002). The strong disposition to self-medication, justified by the socio-economic conditions of the majority of the population, places the country still in the perspective of seeking resources for the precariousness of the Health Surveillance agencies in inspecting and oppressing unscrupulous practices, as well as creating effective boundaries between the impacts of the industry and the ethics necessary for the maintenance of public health (MONTE & FILHO, 2008, apud SOUZA et al., 2008).

The rational use of a drug begins with the quality of the product that is being administered, going through the appropriate indication and the ideal dosage. The quality suitable for use is directly related to maintaining its stability in relation to its storage and handling conditions. The therapeutic indication is closely related to an accurate diagnosis (LIMA et al., 2010).

In view of this situation, preventive measures are necessary in order to provide information for the daily reduction of risks caused by self-medication and consequently make visible the population's awareness of the danger of adverse effects that certain medications can cause (SOUZA et al., 2008).



OBJECTIVES

GENERAL OBJECTIVE

Point out the risks of self-medication, as well as discuss the importance of the pharmaceutical professional in the process of education and information to the citizen.

SPECIFIC OBJECTIVES

- To know the reasons that lead the population to the practice of self-medication;
- Discuss the risks that self-medication exposes to the population;
- To show the importance of the pharmacist in educating the population about medicines, thus promoting the rational use of these products.

METHODOLOGY

The present study consisted of a literature review on the topic of home pharmacy and the risks of self-medication.

Data collection was carried out through indirect documentation, with extensive bibliographic research in books, scientific articles, dissertations and theses. For this, a search for data in the national and international literature was carried out based on keywords related to the subject, such as: medications, home pharmacy, risks of self-medication, intoxication. These words were used in various combinations in order to restrict the search to the subject of interest. The websites used for consultations were: www.scielo.org, www.ncbi.nlm.nih.gov, www.bireme.br.

Then, two criteria were established for the refinement of the results: the temporal scope of the studies and the language. All articles related to the subject contained in the literature were considered, and the most current ones up to the year of

2011. Articles in Portuguese, English and Spanish were selected. These included review, clinical trials, and observational studies. The data collection period was between June and October 2011.

All selected bibliographies were analyzed and filed, which allowed the organization of all content according to the main ideas, year of publication and authors. The procedure allowed the development of the revision text without loss of relevant information.



LITERATURE REVIEW

HISTORY OF HOME PHARMACY AND SELF-MEDICATION

In Brazil, the Jesuits became almost exclusively responsible for medical care in the first century of colonization of Brazil. They were illustrious observers of fauna and flora, identifying various species and cultivating those with curative effects, studying their mode of action for the various ills that afflicted the colonial population, elaborating formulas and recipes, methodically organized with the name of the College where they were created, the author, the ingredients used, the weight and the purpose (CALAINHO 2005).

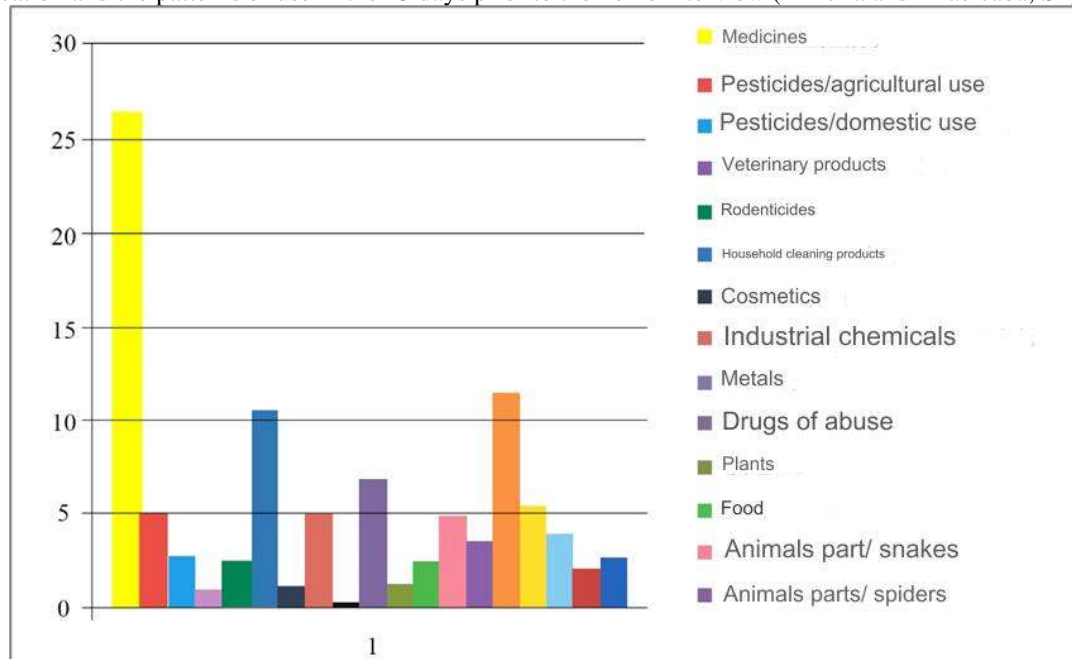
To understand the context of medicines and their importance to society in terms of health, it is necessary to go back in history, seeking to understand some factors that determine the beneficial and harmful effect of this therapeutic practice. The practices employed to combat the ills of the body were based on mysticism, through exorcism and the use of amulets. People used natural medication a lot, perhaps because they did not have access to industrialized medicines, which were very expensive, and also pharmacies were difficult to access, so most people used drugs of plant and animal origin as therapy, even in the face of the lack of knowledge of the causes as to how the drugs caused the disappearance of symptoms (COIMBRA, 2004).

A large part of the Brazilian population has medicines in their homes, accumulating them in order to compose what can be called home pharmacy (FERNANDES & PETROVICK, 2004).

The home pharmacy, constantly stored in inadequate environments, provides several possibilities for irrational consumption and waste, including the facilitation of non-responsible self-medication, as well as the increased risk of unintentional and intentional toxic exposures (TOURINHO et al., 2008).

In a study conducted by Tourinho et al (2008), it was found that analgesics are the class of drugs most stored at home, followed by systemic antimicrobials and drugs that act on the gastrointestinal tract.

Graph 1 - Main pharmaceutical specialties found in home pharmacies according to the groups and subgroups of the classification and the patterns of use in the 15 days prior to the home interview (Limeira and Piracicaba, SP).



Source: Home pharmacies and their relationship with self-medication in children and adolescents (2008)
In 392 residences, 1,598 pharmaceutical specialties were found.
In 313 residences, 1,293 pharmaceutical specialties were found.

For Kovacs & Brito (2006), the use of drugs without a medical prescription, in which the patient himself determines which drug to use, defines self-medication. This generic designation includes the prescription or indication of medicines by unqualified people, such as friends, family and even pharmacy clerks, in the latter case, characterizing the illegal practice of medicine.

Matias (2001) analyzes the problem of self-medication, pointing out that this is a very common practice and adopted by the majority of the population, the elderly are the ones who most use over-the-counter medications, often due to the impossibility of access to medical care, due to financial issues, in addition to the culture of trying to solve health problems with suggestions from third parties and not with expert opinions.

The observance of long-existing legal provisions (Law 5.991, of December 17, 1973) - such as the one that establishes the performance of the pharmacist professional in establishments that dispense and sell medicines - could contribute to minimize the harm resulting from the way pharmacies operate. (BRASIL, 1979 apud BARROS & SA, 2007).

Self-medication can cause unpleasant reactions that are not imagined by those who self-medicate, as the drugs contain substances that can aggravate certain problems, which is why



their administration requires tests, analysis of the patient's history, investigation of allergies, among others (GALVÃO & SENHORINHA, 2008)

Although there are medicines that can be purchased without a medical prescription, people should not misuse them, such as ingesting them in the dose and at the time that is convenient for them. Based on the principle that no pharmacologically active substance is harmless to the body, self-medication can be harmful to individual and collective health (NETO et al., 2006).

THE REASONS THAT LEAD TO SELF-MEDICATION

In Brazil, access to public health care is difficult, and where there is a large part of society in poverty, which does not have the financial resources to pay for a health plan, the practice of self-medication becomes quite common. But the financial factor alone is not enough to explain the practice of self-medication, factors such as education, social class, access to information about medications and, especially, the cultural factor also complement this context (NASCIMENTO, 2005), for these reasons the population follows the indications made by friends, relatives and acquaintances (BERETTA et al., 2010).

According to Cavalcante (2008) it is common to share medicines with other family members or with other residents who live in the same household, which makes it a modality for the irrational consumption of medicines.

In a survey carried out by Cavalcante (2008), it was reported that of his interviewees, about 26.83% of people used medication based on information from neighbors and family members.

Souza et al., (2008) consider among the causes of the indiscriminate use of medicines among the population, especially self-medication, the large number of pharmaceutical products on the market and their advertising; the difficulty of access of the low-income population to medical services; the few awareness campaigns about the possible health problems resulting from this practice, as well as the possibility of obtaining information about medicines through the media, particularly the internet.

There are authors who defend the internet as a source for the dissemination of health-related information, providing the individual with a greater initiative in terms of self-care (BOYER et al., 2005, apud SOUZA et al., 2008). Such a possibility would particularly favor individuals with stigmatized diseases, such as depression and sexually transmitted diseases, who, due to a possible embarrassment and through the anonymity, privacy and convenience that the



internet provides, can obtain information about their symptoms, motivating them to seek medical treatment (BERGER et al., 2005 apud SOUZA et al., 2008).

However, the internet plays a considerable role in promoting the indiscriminate use of medicines, the facilities brought by online pharmacies, in which it is possible to buy medicines without a prescription, give the internet a facilitating role for self-medication (BESSELL et al., 2003; GORDON et al., 2006, apud SOUZA et al., 2008).

Easy access to medicines

According to the World Health Organization (WHO) and the Ministry of Health, Brazil has about 32 thousand medicines. Several medicines that should be sold only with a medical prescription are sold indiscriminately by pharmaceutical establishments, since in Brazil the pharmacy may not be known as a health establishment, but only known as a commercial point of medicines, and these drugs sold without a prescription can lead to self-medication (CERQUEIRA, et al., 2005, apud SOUZA, et al., 2008).

Brazil is considered one of the countries that consume the most medicines, taking the 5th position in the world list of drug consumption, being in first place in consumption in Latin America and occupying the ninth place in the world market in financial volume. This fact may be related to the 24 thousand deaths per year in Brazil due to drug poisoning, and drug poisoning is more common than poisoning related to pesticides and other products (MORAES, 2001, apud SOUZA, et al., 2008).

The excess of pharmacies and medicines that exist in Brazil are considered relevant factors, and makes the population have easy access to medicines, along with the precariousness of the Unified Health System (SUS), due to the delay in consultations, so the patient ends up self-medicating because it is easier to buy the medicine. There are more than 50 thousand drugstores in Brazil, and this figure is considered three times the number for the WHO (NASCIMENTO, 2003, apud ALMEIDA, et al., 2005).

The pharmacy is an easily accessible, free, and fast health establishment, most of the population seeks the pharmacy when it is a simpler symptom, since over-the-counter medicines do not require a prescription to be purchased, and users end up looking for a friend, relative, neighbor, instead of going to the doctor's office (ZUBIOLI, 2009).

Due to the ease of acquiring medications, the accumulation of them in homes is increasing, and can be considered a risk factor for self-medication. (ZAMUNER, 2006, apud PEREIRA et al., 2009).



The home pharmacy, in addition to favoring the practice of self-medication, the lack of care can end up affecting the efficiency of the drug and safety, either due to poor storage, expiration or even accidental ingestion of drugs by children or adults, with a great risk of intoxication, due to the irrational use of drugs (ZAMUNER, 2006, apud PEREIRA et al., 2009).

THE RISKS OF SELF-MEDICATION

Self-medication is a very common practice, which can be influenced by friends, relatives, neighbors, among others, but when practicing self-medication, this act can make it possible to aggravate or delay the diagnosis of a disease that may later worsen, in addition to causing adverse reactions and even drug intoxication (OGA WA, et al., 2001).

According to Malhotra et al, (2001), the risks of death related to polypharmacy are a major public health problem and a cause of hospital admissions. Among the negative problems related to medications are intrinsic factors, drug activity, therapeutic failures, non-adherence to treatments, or the manifestation of adverse events.

In Brazil, there are no studies on drug-related morbidity and mortality, only surveys on drug poisoning (SARRA et al., 2008). According to data published by the National System of Toxic-Pharmacological Information (SINITOX), medicines are the main culprits of poisoning, corresponding to 85% of the cases of poisoning, and one of the possible explanations would be that the population does not have correct information on where to store them, how to acquire and administer them, which can compromise their quality (SARRA et al., 2008).

Most of the Brazilian population has low education and little access to information regarding the correct use of medicines, the practice becomes particularly dangerous. Another concern about the misuse of drugs is the increase in microbial resistance to antibiotics. Two-thirds of antibiotic sales are thought to have originated from self-medication, even though physicians also prescribe antibiotics unnecessarily, as in cases of viral infections of the upper respiratory tract (SERVIDONI et al., 2006 apud SOUZA et al., 2008).

Until the beginning of the antibiotic era, resistance among bacteria that cause human infection was uncommon. The increase in the problem coincides with the introduction and extensive use of new antibiotics from the 1960s onwards. However, the importance of antimicrobial substances in the expansion of the resistance phenomenon lies in their role in selecting resistant structures, through the selective pressure resulting from their clinical, industrial, commercial and experimental use (TAVARES, 2002 apud MENEZES et al., 2004).



According to Menezes et al, (2008) the established concept is that, for most bacteria, it is not antimicrobials that transform a sensitive bacterium into a resistant one, these do not seem to be mutagenic agents and, therefore, are not a direct cause of the emergence of resistance. What can occur with the incorrect use of antimicrobials is the selection of resistant bacteria that already exist in a bacterial population.

According to Sarra et al., (2006), in order to solve this and other problems arising from inappropriate use, it is necessary to promote the rational use of medicines through the reorientation of these practices and the development of an educational process for both the health team and the user.

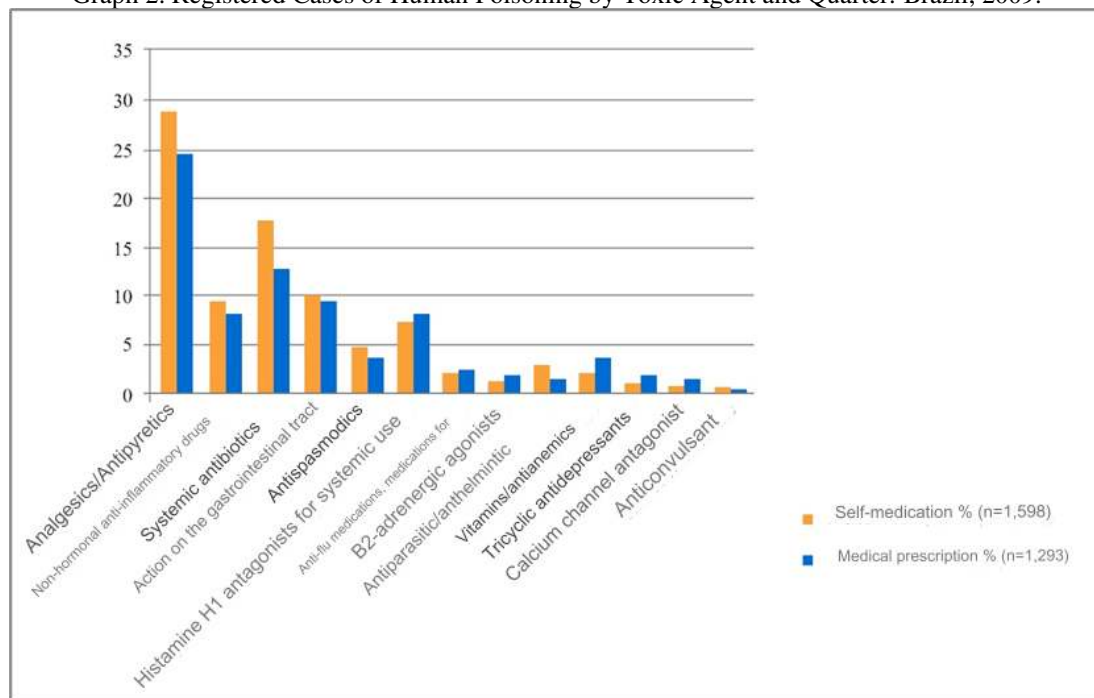
DRUG POISONING

Drugs, as they are molecules, produce their effect by interacting with other molecules. This interaction can cause effects at all levels of biological organization, from molecules to human populations (RANG et al., 2007).

The SINITOX (National System of Toxic-Pharmacological Information) uses the terminology "intoxication" to designate episodes with different conceptualizations, compromising the understanding of its statistics. For this reason, it was proposed that the object of study "toxicological event" be defined as an event in which there is possible exposure to a toxic agent and possible resulting toxic effects, which characterize a picture of intoxication or withdrawal syndrome or adverse reaction and which need to be investigated for clarification. Due to the importance of drug-related diseases and the lack of available information, studies are suggested to analyze this worrying situation (GANDOLFI AND ANDRADE, 2006).

The information about the irrational use of medicines in Brazil is alarming. The cases of drug poisoning that occurred in the country in the quarters of 2009, according to the statistics of SINITOX of the Oswaldo Cruz Foundation (FIOCRUZ), reveal that drugs correspond to 26.44% of poisonings in Brazil.

Graph 2. Registered Cases of Human Poisoning by Toxic Agent and Quarter. Brazil, 2009.



Source: MS/FIOCRUZ/SINITOX

Conventional signs used:

... Numerical data not available

- Numerical data equal to zero not resulting from rounding

There are many approaches in proposing a policy of rational use of medicines associated with a coherence of prevention, as opposed to the logic of the market, for which every restriction means a decrease in profits and must be rigorously combated. However, the data admit that a demanding surveillance could prevent toxicological events, by controlling the criteria for sale, determined in the registration of medicines. By unifying educational measures for safe consumption, not only prevention, but also health promotion would be achieved (GANDOLFI AND ANDRADE, 2006).

THE IMPORTANCE OF THE PHARMACIST IN THE RATIONAL USE OF MEDICINES

At the beginning of history, the pharmacist was the connoisseur of formulas, possessed the wisdom of healing mixtures and synthesized drugs. He is active in several areas that comprise the entire production chain of a drug (industry), clinical and toxicological analyses, molecular biology, scientific research, public health, health surveillance, magistral pharmacy, drugstore and the hospital space (OLIVEIRA, 2008).

The pharmaceutical profession, one of the oldest and most charming, has as its principle the cure and improvement of the quality of life of the human being. The pharmaceutical



professional, the representative of this science and holder of this art, performs his functions permeated by knowledge and ethics (OLIVEIRA, 2008).

In the context of pharmaceutical practice, in which concern for the patient's well-being becomes a priority of actions, the pharmacist assumes a fundamental role, adding his efforts to those of other health professionals and those of the community for health promotion (VIEIRA, 2005).

Within this logic, the pharmacy service should assume a complementary role to the medical service in health care. The patient who leaves the office with a prescription will have a greater resolution of his problems if he has access to the prescribed treatment and if the prescription meets the therapeutic rationality. The possibility of intervention aimed at therapeutic effectiveness can be achieved with the implementation of pharmaceutical care (VIEIRA, 2005).

FINAL CONSIDERATIONS

It is known that ending self-medication is very difficult, but it is possible to minimize it, knowing that there is a close relationship between professional and patient in order to ensure the well-being of the population in general.

It is necessary for the population to be aware of the risk they run when they self-medicate on the recommendation of friends or professionals who are not qualified to be prescribing medication, as much as they are common symptoms, each person has an organism and reaction to the medications.

Pharmacists seek their space in society every day and must be endowed with scientific knowledge to perform their function of promoting the health of the population, exalting and evidencing their training. The pharmacist within his qualifications is the professional trained to provide pharmaceutical assistance, whose main objective is to make the individual aware that medicines used correctly and under medical guidance provide relief from ailments that affect their health.

The doctor is essential when prescribing a medication, even if it is sold without the obligation of a medical prescription. He is the professional with the training to assess the patient's needs, from their health history to possible drug interactions and possibilities of allergies and for this, prescribing a treatment appropriately.

It is necessary for people to be aware of the risk they run when they adhere to self-medication, it is necessary to have the pharmacist's guidance in guiding and educating the consumer so that he recognizes that over-the-counter products can also have adverse effects as



well as those sold only under prescription. For this, the pharmacist must have all the necessary scientific knowledge to transmit to the patient all the information about the drug and the pharmaceutical form, thus ensuring the proper use of the drug. The pharmacy is not only a point of sale for medicines, but also a space for the search for health.



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