

SELF-MEDICATION IN THE ELDERLY AND HEALTH RISKS: AN INTEGRATIVE LITERATURE REVIEW

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Abstract: This study aimed to investigate the use of over-the-counter drugs by the elderly, identifying the most commonly used drugs, the reasons for self-medication and the risks associated with this practice. This is an integrative literature review, carried out in the LILACS, SCIELO, MEDLINE and PUBMED databases, from July to October 2022. The descriptors “elderly”, “self-medication” and “medicine consumption habits” were used. , in Portuguese and English, including works available in full and free of charge, with up to 5 years of publication and dealing exclusively with self-medication in the elderly. Repeated works, works published in annals, theses and dissertations were excluded. The data were analyzed and recorded in the Microsoft Excel 2019 software. With this, it was possible to notice that there is a good availability of articles on self-medication in the elderly. It was evident that the lack of information and knowledge is still an issue that remains until the present day, since self-medication is strongly based on everyday empiricism, which can cause various health risks, especially for the elderly population. It is hoped that the results of this study can contribute to the theoretical foundation of further research, so that, this way, educational actions are developed, aiming at educating the population about the risks of self-medication.

Keywords: Self-medication; Elderly; Health risks.

INTRODUCTION

With the significant growth of the elderly population worldwide, there is an increase in chronic degenerative diseases, a greater number of medications used and an increase in demand for health services (SECOLI et al., 2018). In Brazil, the public health system is unable to serve the population with the agility and quality that it must, resulting in difficulties in accessing its services (OLIVEIRA et al.,

2018). Added to this is the fact that a large portion of society does not have the financial means to pay for private medical care. In this scenario, the practice of self-medication becomes quite frequent (GUSMÃO et al., 2018).

However, the use of drugs does not always occur rationally, and may have deleterious effects related to their misuse (SECOLI et al., 2018). The consequences of the misuse of medications can have even more harmful effects on the elderly, since they consume more drugs than other age groups, in addition to having compromised hepatic metabolism and renal clearance (BESERRA et al., 2019). Thus, self-medication in the elderly can be considered a public health problem, increasing the risk of hospitalization and death in this group of individuals (GUSMÃO et al., 2018).

Medicines are essential for health care and collaborate to obtain a significant improvement in the state of people who use them rationally (SILVA et al., 2019). However, due to the medicalization of society, which aims to guarantee immunity, peace of mind and resolution of health problems considered simple, there is an exacerbation of the use of these inputs, leading people to stock excess drugs in their homes (MELLO et al., 2020). In addition, it is very common to share medications with family members, neighbors or friends, to use leftover medications from previous treatments and to reuse old prescriptions (SECOLI et al., 2018). Other factors that contribute to the practice of self-medication are familiarity with the medication and previous positive experiences. In view of this, elderly people who self-medicate are more likely to be at risk of possible medication changes, poisoning and accidental deaths (BARROSO, 2015).

Among all age groups, the elderly are the ones who consume the most medicines without a medical prescription, perhaps

because they are the ones who suffer most from diseases when compared to other age groups (GUSMÃO et al., 2018). The classes most used in the form of self-medication are analgesics, anti-inflammatories and antipyretics (dipyron, acetylsalicylic acid (ASA), paracetamol and diclofenacs, anti-influenza drugs and vitamins (ELY et al., 2015). As they use, on average, of two to five drugs daily, the elderly become more sensitive to adverse effects and drug interactions. The consequences can be serious due to physiological changes specific to aging that alter the effect of certain drugs, making them potentially inappropriate for people elderly, either due to lack of therapeutic efficacy or because they have adverse effects greater than the benefits (SILVA et al., 2019).

It is known that there is no medication that is completely effective and safe, therefore, self-medication can be considered a practice that is potentially harmful to health, especially in the elderly. Therefore, the misuse of medication without careful evaluation by a qualified professional can cause adverse reactions, the appearance of nonspecific symptoms and the worsening of the health condition. In this sense, the most common errors that can trigger more severe reactions are: inappropriate medication, wrong dose, inadequate frequency, insufficient or excessive period of consumption, as well as inadequate combination with other drugs causing undesirable interaction (SECOLI et al., 2018).

The occurrence of drug interactions is frequent, which can occur simultaneously with the administration or later, and has an influence on the therapeutic action by modifying the kinetics of the drugs in any of its stages (NEVES; SILVA; JUNIOR, 2018). Effects can appear after the first dose, several doses, or after the medication is discontinued, and even when the medication has been successfully given for a long period. The risks

of misuse of drugs by the elderly occur because they have peculiarities, such as changes in body mass, with a decrease in the proportion of water, a decrease in hepatic blood flow, a decrease in hepatic metabolism and a decrease in renal excretion rates, tending to increase concentrations plasma concentrations of drugs, increasing the rates of toxic effects. As a result, the elderly are more susceptible to the consequences of self-medication (PEREIRA et al., 2017).

Faced with the problems that may occur in the elderly due to self-medication, the present study is justified by the need to investigate the misuse of medication by this population and to provide information about the dangers involved in such an act. In this sense, it was intended to verify the risks and factors associated with the practice of self-medication in the elderly through a literature review and identify issues that needed to be clarified in relation to the subject, serving as an instrument for further studies and measures aimed at improving the provision of information on public health services, as well as the expansion of preventive measures for possible complications resulting from adverse reactions and drug interactions. Thus, it will be possible to contribute to the reduction of losses associated with the inadvertent use of medicines for the elderly (MARQUES, 2018).

GOALS

The general objective of this study was to investigate, through an integrative literature review, the use of over-the-counter drugs by the elderly. The specific objectives were to investigate the most commonly used drugs in the form of self-medication, to report the reasons for using drugs without a medical prescription and to identify the risks and factors associated with the practice of self-medication.

METHODOLOGY

This is an integrative literature review, carried out in the LILACS, SCIELO, PUBMED and MEDLINE databases, from July to October 2022. The search strategies were carried out using descriptors contained in Descriptors in Health Sciences (DeCS) and Medical Subject Headings (MeSH), combined with Boolean operators, in Portuguese (“elders” AND “self-medication” OR “medicine consumption habits”) and English (“elder” OR “self-medication”). Works available in full and free of charge, published from 2016 to 2022, that specifically dealt with self-medication in the elderly, in Portuguese and English, were included. Repeated works, works published in annals, theses and dissertations were excluded. An instrument was developed of data collection containing authors, year, databases, journal, country, methodological characteristics of the articles and results achieved. The results obtained were analyzed and recorded in Microsoft Excel 2019 software.

RESULTS

In view of the results of this research, 682 articles were identified in the LILACS database, 24 in SCIELO (all of which were already presented in LILACS and, therefore, were excluded), 26 in MEDLINE and 20 in PUBMED, and of the latter, eight were already included in LILACS, therefore, they were excluded. 605 articles were excluded from the study, according to the inclusion criteria, leaving 147 articles. We excluded 77 articles that were not available online in full text or were outside the period in question. Thus, 70 articles remained, of which the abstracts were read, 45 of which were excluded, as they did not respond to the guiding question. There were then 25 articles to be read in full. Regarding the ethical aspects, the authors' ideas, their definitions and concepts presented

in the analyzed articles were respected.

We emphasized that the criterion adopted for establishing a category was the existence of 25 studies dealing with the content in question. Among the articles included, according to the content analysis, the highest frequency occurred in studies that addressed “medicines most used in the form of self-medication”, with 40%. In Table 1, we present the frequency of studies by category, according to the content analysis of the articles.

The first category concerns the “medicines most used in the form of self-medication”. For the most part, analgesics stand out, used to relieve pain, fever and other symptoms that may occur in daily life, according to Table 2.

The second category focuses on “reasons for using over-the-counter medication”. This category is justified by studies showing that the practice of self-medication is common among the elderly, and the prevalence varies depending on the place of study and previous positive experiences. Thus, the category is summarized in Table 3.

The third category focuses on “risks and factors associated with the practice of self-medication”. This category is justified by studies demonstrating that the practice of self-medication has consequences for the health of the elderly. Thus, the category is summarized in Table 4.

DISCUSSION

It is understood that self-medication is dangerous for any age. However, in relation to the elderly public, the danger comes with a greater proportion, as it is in this age group that comorbidities arise. Thus, there is the consumption of various medications, including those that are not prescribed by a doctor. In the studies collected, all articles focus on self-medication in the elderly, identifying the most commonly used medicines in the form of self-medication, the reasons for using medicines

without a medical prescription and the risks and factors associated with the practice of self-medication (RÊGO et al., 2020).

Initially, the great interest aroused by the topic addressed among the researchers, whose works constituted, in the years 2017 and 2019, respectively, 6 publications and 7 publications (MARINHO et al., 2021). These numbers become even more curious if we consider that self-medication among the elderly has a prevalence of 2-5 cases per 10,000 cases (LOPES et al., 2016).

Faced with so many other clinical situations that are equally significant and worrying, and much more frequent, what would lead to such interest among researchers in self-medication in the elderly? Certainly, this is a serious and thought-provoking picture, the understanding of which can contribute to the study of other health conditions of the elderly, in general (SANTOS; CUNHA, 2017).

In what was presented in the studies, it was evidenced that analgesics are the most used class without medical prescription. The analgesic consumed by the elderly corresponds specifically to paracetamol, indicated for mild to moderate pain, such as headache, migraine, musculoskeletal pain, menstrual cramps, sore throat, toothache, pain after dental procedures, pain and fever after vaccination and osteoarthritis pain (FANHANI et al., 2019). The drug is one of the most indicated for the treatment of pain or fever, as it is cheap, safe and has a very low rate of side effects, provided, of course, that it is used correctly and within the recommended doses and with medical recommendations (SILVESTRE et al., 2019). Through its indications to relieve signs and symptoms of pain and fever, the elderly chooses to be a low-cost medicine (ANDRADE et al., 2019).

Anti-influenza and anti-inflammatories appear next as the classes of drugs most used by the elderly. It must be noted that the

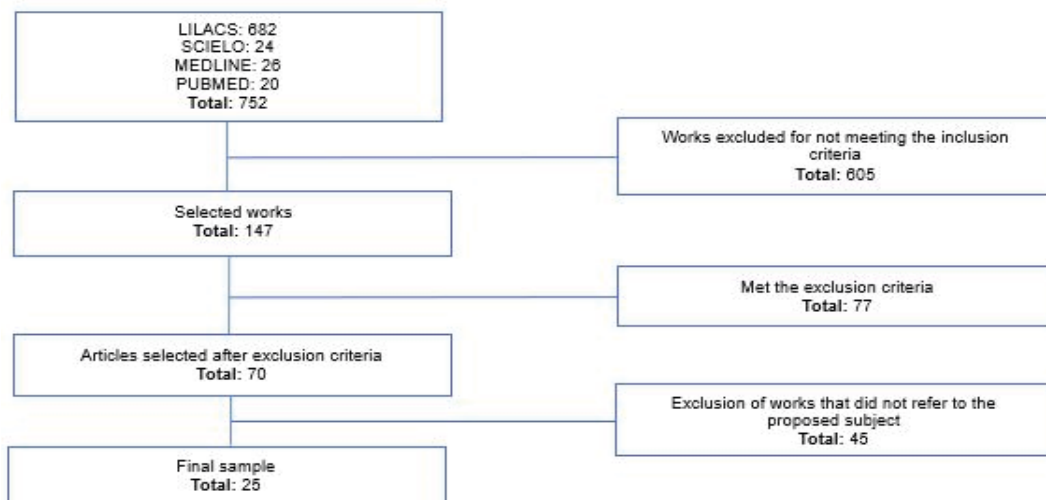


Figure 1: Identification, sorting and eligibility flowchart of articles.

Medicines most used in the form of self-medication	Reasons for using over-the-counter drugs	Risks and factors associated with the practice of self-medication
40%	24%	36%

Table 1: Percentages of studies by category according to content analysis.

Painkillers	Anti-inflammatories	Anti-flu	Antibiotics
37%	25%	25%	13%

Table 2: Percentages of drugs most used in the form of self-medication.

Previous positive experiences	Self-medication culture	Sociodemographic factors
50%	33%	17%

Table 3: Percentages of reasons for using over-the-counter medication.

Worsening of systemic arterial hypertension (SAH)	Renal insufficiency	Worsening of diabetes mellitus (DM)	Intoxication	Bacterial resistance
34%	22%	22%	11%	11%

Table 4: Percentages of risks and factors associated with the practice of self-medication.

administration of these drugs benefits from the ease of acquisition, as they are over-the-counter drugs and are available in domestic pharmacies, drugstores or, in some cases, in supermarkets (DUARTE et al., 2019).

Finally, the occurrence of cases of self-medication due to the administration of antibiotics was identified. Punctuating Collegiate Board Resolution (RDC) No. 20, of May 5, 2011, of the National Health Surveillance Agency (ANVISA), this type of medicine can only be purchased under medical prescription. The occurrence of consumption of this type of medication can be explained by the administration of leftover antibiotics from other patients or even pharmacies and drugstores dispensed the medication without a prescription (CARVALHO; CARVALHO; PORTELA, 2018).

Sociodemographic factors are associated with the practice of self-medication during old age, as populations in developing countries, such as Brazil, have been showing economic and social characteristics that reflect consequences of potential risks to which an elderly person may be exposed. In this sense, socioeconomically disadvantaged elderly people with a lower level of education practiced and/or practice self-medication more frequently. In this regard, the difficulty of accessing the public health service and the lack of awareness about the risks that self-medication can cause can be highlighted. Therefore, these factors are reflected in another subcategory, the culture of self-medication (DUARTE et al., 2019).

The culture of self-medication has been treated as a form of self-care with health. However, this behavior encompasses several health risks, such as drug interactions, intoxication, disease masking and death, and is therefore considered an important global public health problem (LUTZ; MIRANDA; BERTOLDI, 2017). When it comes to self-

medication in the elderly, the concern tends to be even greater, since the risks are very high, causing negative effects, from physical to mental effects, aggravating their health (LIMA et al., 2017).

According to what has been found in a survey of the international literature, it is evident that self-medication is an existing practice among this target audience, with prevalences ranging from 2.2% to 72.4%, mainly due to the good experiences that can occur, that is, by the disappearance of symptoms quickly (MUNIZ et al., 2017). However, the presence of such behaviors by the elderly is a practice that must be discouraged, since this conduct exposes health to pharmacological effects, which can lead to catastrophic outcomes, such as intoxication and worsening of diseases (ALMEIDA; SANTOS; SANTOS, 2017).

The irrational administration of drugs constitutes a behavior that can be of high risk, since any drug is not risk-free and must be considered a public health problem. Accordingly, it is necessary to expand information on the risks and benefits of medication use during old age and to develop systems of safe medication prescribing practices (AQUINO et al., 2017).

It was found that drug intoxication has been a recurrent discussion, seen not only as a health problem in Brazil, but also worldwide. Its main causes pervade by unruly administration and/or accidental ingestion. The main drugs involved in poisoning by the elderly are: analgesics, anti-flu, anti-inflammatory, antiallergic and antibiotics. In this sense, intoxications can be classified as chronic and acute, the latter being common in elderly people with suicidal tendencies, based on the Ministry of Health and ANVISA (LOPES et al., 2016).

Excessive drug consumption directly contributes to the emergence of drug-resistant superbugs from the overuse of antibiotics.

This stems from the lack of information for the elderly about the risks it can cause. In some cases, antibiotics can be administered by injection, in this case only handled by health professionals. The reason for the consumption of antibiotics by the elderly stems from the expectation of producing an immediate cure, and it is also thought that the effects will only be effective and not adverse (SANTOS; NOGUEIRA; BORJA-OLIVEIRA, 2018).

Regarding elderly people with systemic arterial hypertension (SAH) and diabetes mellitus (DM), studies show that this public has great targets for self-medication, even with the assistance of the program created by the Unified Health System (SUS), that is, the HIPERDIA (PRADO; FRANCISCO; BARROS, 2016). Studies show that some registered elderly patients administer medications related to SAH and DM on their own, similar to what was mentioned earlier, lack of knowledge, such as knowledge about the program (SANTOS; CUNHA, 2017). This way, self-medication makes the work of the Family Health Strategies (ESF) difficult, all this causing self-medication to prevail and health problems to increase during the treatment of the aforementioned diseases (BUENO; ALMEIDA; ROCHA, 2016).

The indiscriminate use of over-the-counter medicines can be extremely dangerous and harmful to the kidneys. In this sense, the results point to another risk arising from self-

medication in the elderly, that of renal failure. This risk represents the inability of the kidneys to perform their main functions, such as eliminating fluids and waste produced by the body, such as eliminating ingested medications and toxins, in addition to regulating water and hormones. This problem can also be caused by the previously mentioned diseases, that is, SAH and DM (RODRIGUES et al., 2016).

CONCLUSION

Based on the results achieved, it was possible to notice that there is a good availability of articles on self-medication in the elderly. It was evident that the lack of information and knowledge is still an issue that remains until the present day, since self-medication is strongly based on everyday empiricism, which can cause various health risks, especially for the elderly population. Although Brazil has regulations regarding self-medication, such as the purchase of antibiotics only with a medical prescription, there are still flaws in the legislation. Thus, rigorous changes are needed in the application of health laws in the country, such as the development of effective pharmacological care measures, both in the public and private systems. It is hoped that the results of this study can contribute to the theoretical foundation of further research, so that, this way, educational actions are developed, aiming at educating the population about the risks of self-medication.

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