



ORIGINAL ARTICLE

Self-medication in older adults from the El Carmelo community and associated factors

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ABSTRACT

Introduction: self-medication among older adults is a common and concerning practice that carries potential negative health consequences.

Objective: to characterize the factors associated with self-medication in older adults from the El Carmelo Parish.

Methods: a descriptive, cross-sectional study was conducted with a sample of 200 older adults belonging to the El Carmelo Parish in the city of Tulcán. A questionnaire was applied to collect information, which allowed the analysis of variables using descriptive statistical methods.

Results: among the sociocultural and economic factors identified, 75 % of older adults belong to the rural sector, 54 % have primary-level education, 37 % report monthly income below 50 USD, 37 % are widowed, and 65 % lack social security affiliation. Fifty-four percent of participants reported self-medicating once per week (42 %); medications are rarely obtained through medical prescriptions (39 %). The main reason for self-medication was lack of economic resources (39 %). Cold medicines were the most frequently consumed (32 %), with headache (35 %) and drowsiness (24 %) being the main adverse effects experienced.

Conclusions: Self-medication should be considered a frequent event and a modifiable risk factor. There is a clear need for state intervention through public policies aimed at this vulnerable group to ensure comprehensive care.

Keywords: Aged; Self Medication; Risk Factors.

INTRODUCTION

Self-medication in older adults (OA) is a common and concerning practice with potential negative health consequences. Self-medication refers to the use of medications without the supervision or approval of a health professional, which includes the use of over-the-counter medications, the continued use of prescription medications beyond the recommended period, or even the use of medications prescribed for another person.⁽¹⁾ This is why self-medication represents a social problem practiced by a high percentage of the population daily worldwide, sometimes even with the assistance of a health professional.⁽²⁾

This phenomenon is due to factors such as lack of time, easy access to medications, economic limitations, and poor health education, generating risks such as resistance, toxicity, and dependence. Studies in Latin America show the influence of pharmacies, social recommendations, and the predominance of NSAIDs, with a higher incidence in women, exacerbating health complications.^(3,4)

In this at-risk population group, self-medication, especially with nonsteroidal anti-inflammatory drugs (NSAIDs), represents a growing risk due to its adverse gastrointestinal and cardiac effects. Studies such as Caicedo's,⁽⁵⁾ demonstrate that the frequent use of paracetamol, diclofenac, and ibuprofen, along with other drugs such as omeprazole and antibiotics, is associated with liver toxicity, arrhythmias, and kidney disorders. Thus, the prevalence of their use is linked to chronic diseases, where the combination of drugs without medical supervision increases complications, reinforcing the need for education, rational use, and multidisciplinary approaches to prevent serious consequences in this vulnerable population.

The importance of addressing self-medication in older adults lies in the fact that it constitutes a public health problem that directly affects their quality of life and safety. This population group, due to their vulnerability and the presence of chronic diseases, is exposed to high risks of drug interactions, adverse effects, and antimicrobial resistance. Recognizing the magnitude of this phenomenon allows for the design of public policies, educational programs, and community strategies that promote the rational use of medications, encourage prevention, and guarantee adequate access to health services, thus contributing to reducing complications and protecting the overall well-being of older adults.^(6,7,8) With this in mind, the present research was conducted, with the objective of characterizing the factors associated with self-medication in older adults in the El Carmelo Parish.

METHODS

A descriptive, cross-sectional study was developed in AM belonging to the Carmelo parish of the city of Tulcán. The population consisted of the 246 AM residents of the El Carmelo community, according to data provided by the parish council. The following statistical formula was applied to calculate the sample size, resulting in 200 older adults.

$$n = \frac{Z^2 * P * Q * N}{e^2 * (N - 1) + Z^2 * P * Q}$$

Where:

Z: coefficient that takes into account the level of confidence with which one works, it is established to work with a minimum of 95 % confidence for which the value of Z=1.96.

P: percentage of the population that meets the characteristics of interest for the study.

Q: percentage of the population that does not meet the characteristics of interest for the study.

$Q = 1 - P$

When these proportions are not known, the assumption of maximum statistical variability $P=Q=50\%$ is made.

E: error that is worked with.

$$n = \frac{1.96^2 * 0.5 * 0.5 * 246}{0.05^2 * (246 - 1) + 1.96 * 0.5 * 0.5}$$

$$n = \frac{3.8416 * 0.25 * 246}{0.0025 * (246 - 1) + 1.96 * 0.25}$$

$$n = \frac{203.6048}{0.0025 * 245 + 1.96 * 0.25}$$

$$n = \frac{203.6048}{1.0175}$$

$$n = 200,103$$

The sampling method used was probabilistic, simple random, requiring compliance with the inclusion criteria (patient interested in participating in the study, with their approval through the signing of the informed consent) and exclusion criteria (patient with terminal illness or cognitive impairment).

A questionnaire was used to obtain information. It was a closed-ended, multiple-choice questionnaire. It consisted of two sections: the first collected sociodemographic data, and the second contained 13 questions related to the research topic.

The data obtained from the individual surveys were grouped and tabulated using Microsoft Excel, and subsequently, descriptive statistics were used for analysis.

RESULTS

The older adult population analyzed is primarily between 65 and 70 years old (48 %), predominantly female (58 %) and from urban areas (75 %). They exhibit low levels of education, with more than half having only completed primary school (54 %), and economic vulnerability, as 37 % earn less than US\$50 per month. Regarding marital status, widowed individuals (37 %) and married individuals (31 %) are the most prevalent, while 65 % lack health insurance, demonstrating a significant lack of healthcare coverage. These factors reflect risk factors that encourage practices such as self-medication and can lead to complications in their well-being.

Fifty-four percent of older adults in the community indicate that they do not have easy access to medical care at the health center, representing a significant problem in access to health services. Similarly, 54 % of those surveyed admitted to having self-medicated at some point, with 42 % of them doing so once a week.

39 % of respondents stated that they never obtain medications through a medical prescription, suggesting a high prevalence of self-medication or acquisition of medications without proper medical supervision; likewise, 39 % recognized that limited economic resources are the main reason for self-medicating.

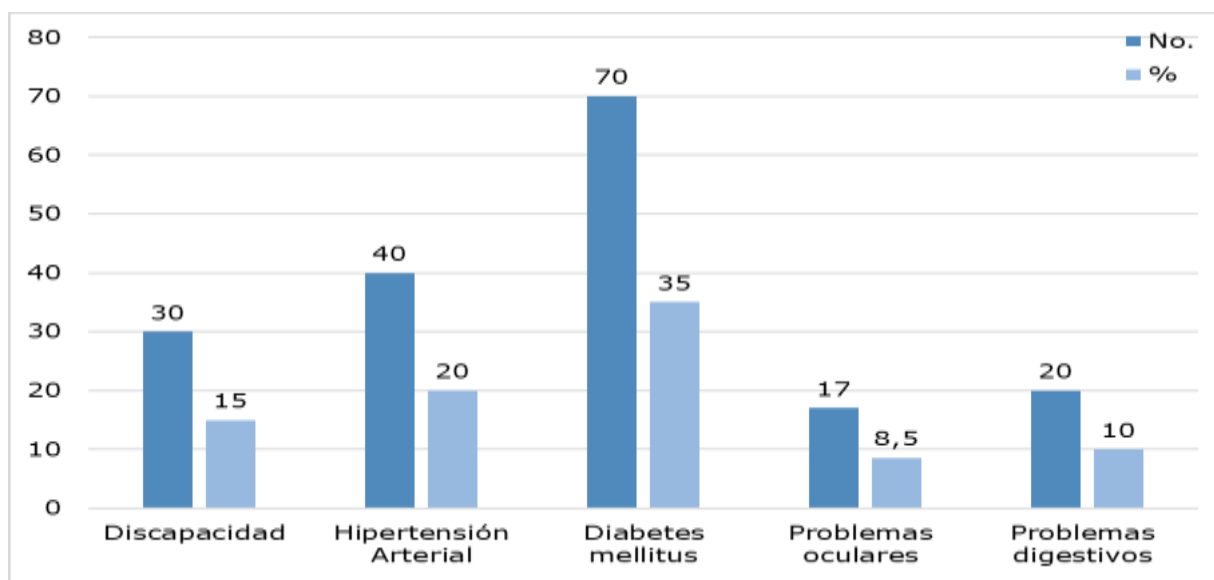


Fig. 1 Distribution of the sample according to the presence of diseases and conditions that influence the use of drugs.

Figure 1 shows the distribution of the sample according to the presence of diseases and conditions requiring medication use. It can be seen that 35 % of respondents have diabetes mellitus, with hypertension (20 %) being the second most frequent non-communicable disease.

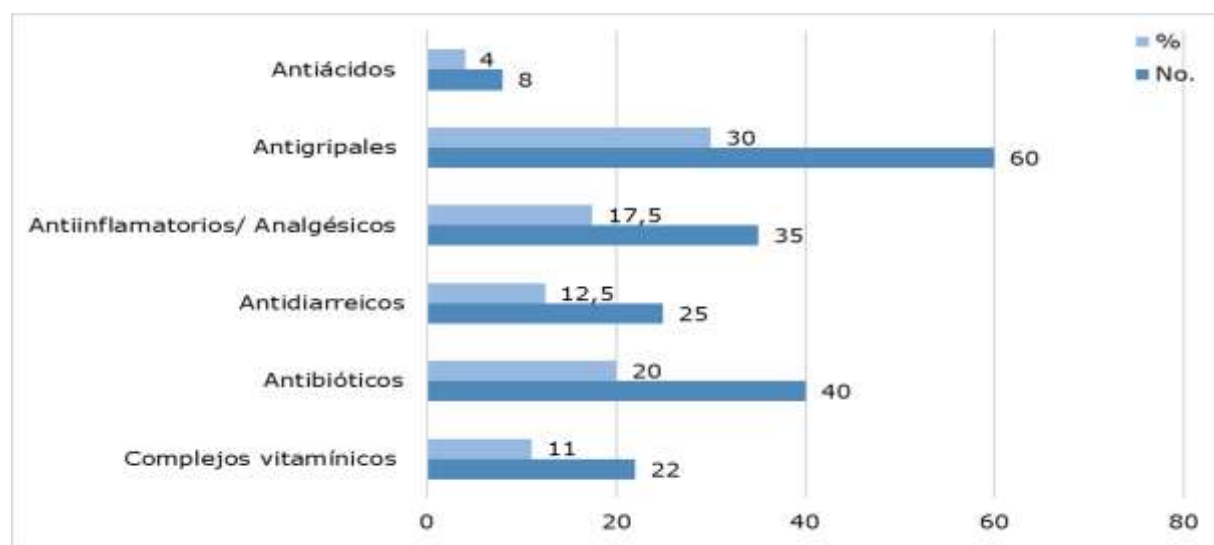


Fig. 2 Drugs consumed without a medical prescription.

Figure 2 specifies that flu medications (30 %), antibiotics (20 %), and anti-inflammatory/analgesic drugs (17,5 %) are the main drugs consumed without a medical prescription.

It is necessary to detail how the 31% of those surveyed always self-medicate by modifying the dose, frequency, or duration of the prescribed treatment, which is alarming, since this behavior can have significant adverse effects on their health, such as the development of drug resistance, serious side effects from overdosing, dangerous drug interactions, and inadequate management of their health conditions.

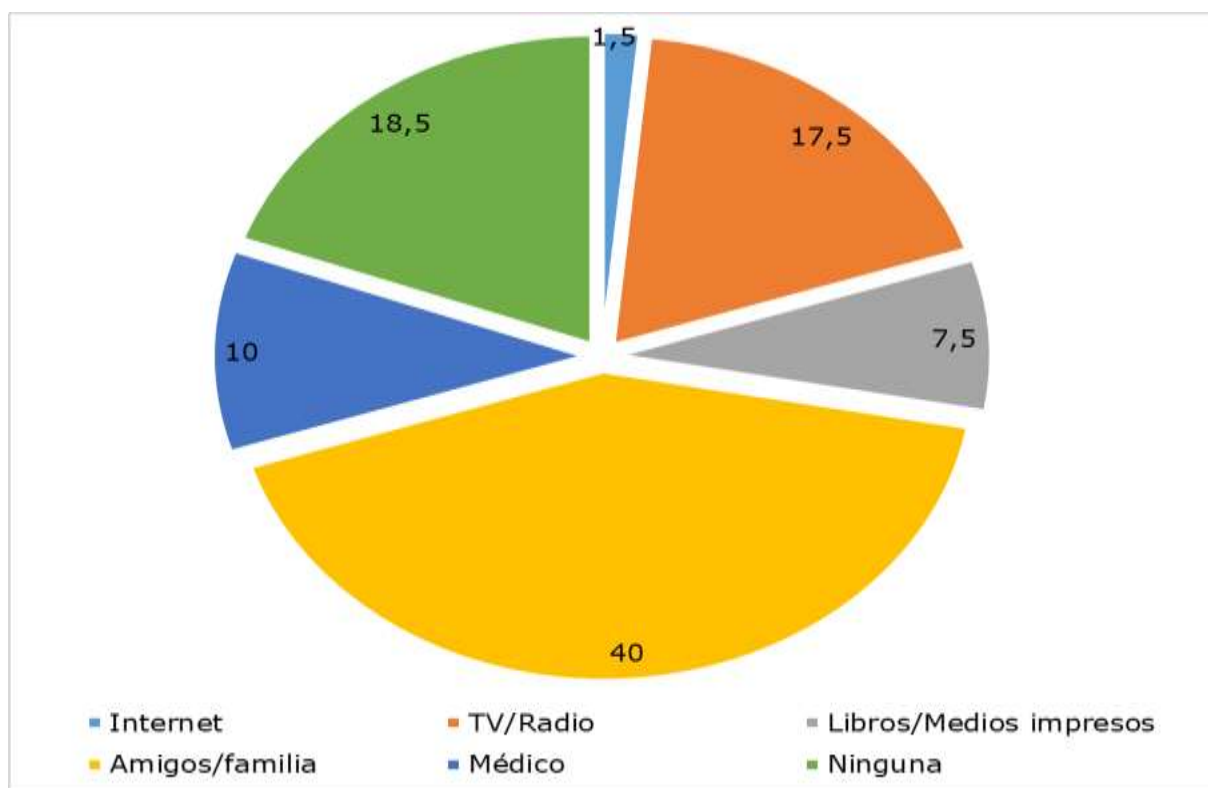


Fig. 3 Main source of information consulted before self-medicating.

It is worrying that 40 % of respondents indicated that they rely on friends or family as their main source of information before self-medicating, followed by TV/radio (17,5 %), while only 10 % acknowledge resorting to the judgment of a doctor (Fig. 3).

Thirty-five percent of respondents reported experiencing headaches as a side effect of self-medication. This alarming figure suggests that a significant number of people may be consuming medications without proper precautions or adequate knowledge, resulting in adverse reactions. Similarly, 65 % of respondents indicated they have never been informed by a healthcare professional about the risks of self-medication, while 68 % admitted they were unaware of the risks and complications associated with it.

DISCUSSION

Alfaro et al.,⁽⁹⁾ define self-medication as the consumption of medicines or drugs by the patients' own decision and without the assistance of a health professional; in addition, it includes the acquisition of drugs without a medical prescription, reusing those prescribed for another disease, obtaining them in close social circles, using medicines accumulated in homes, prolonging or interrupting a medical treatment and altering the dose of one already prescribed.

This research revealed that 54 % of older adults have resorted to self-medication at some point, a finding that coincides with that reported by Cabezas,⁽¹⁰⁾ in his study, which describes a high frequency of this practice and a predominance of analgesic and antipyretic use. Similarly, our study identified that 32 % use cold and flu medications, 19 % analgesics, and a concerning 22 % antibiotics, which represents a significant risk of bacterial resistance, alterations in the gut microbiota, and increased healthcare costs for the individual, the family, and the state. These results are similar to those described by Ortiz et al.,⁽⁷⁾ who indicate that the most commonly used non-prescription medications are available without a prescription, notably ibuprofen, analgesics, expectorants, antitussives, and antihistamines, in addition to a high use of antibiotics despite their prescription-only nature.

Among the reasons given for resorting to self-medication, 39 % cite a lack of financial resources, 20 % a lack of time, 19 % the easy access to medications in pharmacies, and 11 % a lack of medication in public health institutions. These factors highlight significant challenges and shortcomings in the health system that lead people to make potentially harmful decisions for their well-being. This is consistent with the findings reported by Lujan Salinas.⁽¹¹⁾

Among the pathologies that are related to and increase the frequency of self-medication in this population group, diabetes mellitus stands out at 22 % and hypertension at 39 %. These are common chronic non-communicable diseases in this age group, which necessitate ongoing and timely pharmacological treatment, as well as adjustments to the specific needs of each individual. They can also generate adverse reactions to other medications that may be required for other age-related pathologies. This finding was also supported by Castro Lemos et al.⁽¹²⁾

Hernández,⁽²⁾ in his book "General Pharmacology. A study guide" states that self-medication involves the consumption of any type of medication, without taking into account its origin (herbal, synthetic or homeopathic), also encompassing everything that affects the prescription made by the health professional, which means the use of medications from home or elsewhere, their acquisition, prolongation or interruption of a treatment or the decrease or increase of the doses. Our research highlights the modification of dose, frequency and duration of treatment by the initiative of the patients themselves or of the caregivers; this practice is frequent within the study group and in society in general, finding that 31 % of those surveyed always adjust their treatment and that 52 % do so on few occasions; this condition further increases the prevalence and incidence of the problem under study.

On the other hand, we found that among the causes that influence self-medication, flu-like symptoms stand out at 42 %, headaches at 18 %, and joint pain at 11 %, among other less frequent ailments. These symptoms are considered the main reasons for consultation among older adults, similar to the results mentioned by [reference missing]. Real in his study "Clinical characteristics of self-medication in adults from three Family Health Units in Paraguay" where the symptoms that most motivated this behavior were fever and pain and the main source of acquisition of medications were pharmacies.⁽⁵⁾ And in relation to the acquisition of drugs in this study it was found that 31 % resort to pharmacies and 37 % do so by recommendation of their friends.

In general, self-medication can lead to a number of risks, especially in older adults. These risks can include drug interactions, inappropriate use of medications, adverse reactions, drug resistance, and drug dependence or addiction. It can also result in inadequate diagnosis and treatment of underlying health conditions.⁽¹³⁾ It is essential to implement education and awareness programs for older adults and their caregivers regarding the risks of self-medication. Furthermore, it is crucial to ensure adequate and timely access to the healthcare system, taking into account economic, cultural, social, and age-related factors.

CONCLUSIONS

Self-medication among older adults in the El Carmelo community is influenced by sociocultural and economic factors such as living in a rural area, low educational attainment, income below \$50 USD, marital status (widowed or single), and lack of social security coverage. In this community, more than half of those surveyed self-medicate, making it necessary to consider self-medication as a modifiable risk factor. We must work systematically at the individual, family, and community levels to reduce the harmful effects of various pharmacological treatments associated with this practice and to promote responsible treatment habits.

RECOMMENDATIONS

- Implement initiatives that address the lack of accessibility and social influence on self-medication, strengthening support networks and access to affordable health services.
- Create a long-term evaluation system to monitor the effectiveness of the plan, accompanied by continuous staff training to ensure quality and relevance.
- Extend the program to neighboring communities, adjusting it to cultural and social differences, sharing findings and best practices with health institutions to prevent self-medication at a regional or national level.

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