



Incidence of Self-Medication Amongst Elderly People

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Abstract

The work aims to know the factors that contribute to the self-medication of the elderly people, as well as to characterize the main risks of self-medication in the elder. This is an exploratory descriptive research with a quantitative approach. The study sample con-

sisted of 144 elderly people from the municipality of Morada Nova in Ceará. Data were expressed as mean, standard deviation, minimum and maximum values, as well as simple frequency and percentage calculated using the 20.0 version of SPSS statistical software (Statistical Package for Social Sciences). It was found that 88.2% of the elderly people have had medication for more than a year, 68% have had more than three medications daily, 42.2% of the interviewees had their last appointment less than a month before, 77.8% stated that they did not have help with the use of medicines. In this sense, it was evident that the practice of self-medication is frequent in the elderly people, which reflects the need to work with health promotion groups in order to reduce possible damage caused by the inappropriate use of medicines.

INTRODUCTION

The world population is going through a demographic transition process, in which there is an increase in the elderly population. As a result, measures are increasingly needed to ensure healthy aging, since this

population has a greater worsening of chronic diseases, such as systemic arterial hypertension and diabetes mellitus, which are the most common in this population, making them multiple drug consumers (Ramos, 2013).

It must be considered that the therapeutic benefits of the correct use of medications are undeniable, however their high consumption among the elderly people can lead to health risks due to the decrease in hepatic blood flow, decreased renal elimination, low concentration of blood albumin and changes in cognitive pattern, which can generate misinterpretations about the indication and use of the active ingredients (Silva *et al*, 2015).

The elders are potentially consumers of drugs due to the physiological changes resulting from the aging process, both biological and pathological, and among the most widely used pharmacological classes are antibiotics, anxiolytics, antidepressants and beta-adrenergic drugs. The average daily consumption is two to five drugs per day and are particularly sensitive to adverse effects, drug interactions and toxicity (Oliveira *et al*, 2012; Aziz *et al*,

2012).

The use of medications practically triples as the individual ages, as the tolerance to acute symptoms, such as pain, is reduced and the frequency of this increase can be even greater when considering self-medication practices (Rezende *et al*, 2012).

The most common types of inappropriate use of medicines are related to people who use self-medication and polypharmacy, which are common practices among elders, explained by the number of chronic diseases in this age group, high incidence of symptoms, as well as consultation and treatment with different specialists (Monteiro *et al*, 2014).

In addition to the medication support, prescribed by trained professionals, which is common for the treatment of chronic diseases that appear at this stage of life, the culturally learned behavior of treating certain signs and symptoms with the use of medications or medicines that are indicated by people who are not trained for this purpose, as well as selected by their own will. From this behavior, the practice of self-medication is contextualized, which is a

form of self-care for health, understood as the selection of use of medicines for health maintenance, disease prevention, treatment of diseases or symptoms perceived by people without prescription, guidance or monitoring (Vernisi *et al*, 2016).

There is a consensus that self-medication is one of the examples of drug misuse, considered a public health problem in Brazil and worldwide. In addition, it states that the use of medicines incorrectly can cause a disease to worsen, since the inappropriate use can disguise certain symptoms and the abusive use of these products can facilitate the increase in the resistance of microorganisms, which compromises the effectiveness of treatments (Pereira *et al*, 2014).

The prevalence and factors associated with self-medication among elders have been investigated through population-based epidemiological studies, and the results indicate that this practice varies among elderly people living in different locations. In Brazil, a study carried out in Bambuí, in the state of Minas Gerais, found a prevalence of 17% and in the municipality of Salgueiro, in Pernambuco, 60% of the elderly in-

interviewed practiced self-medication (Oliveira *et al*, 2012).

Factors such as familiarity with the medication, previous positive experiences, the symbolic role that medications have on the population and the difficulties in accessing health services contribute to self-medication. Therefore, elderly people who self-medicate are more vulnerable to risks of intoxication and even to more extreme situations such as accidental death (Silva *et al*, 2015).

Considering elderly population, a study points out the predominance of the use of prescription drugs, but in this age group it is common to prescribe inadequate doses and indications, redundancy and the use of drugs without therapeutic value. In addition, the consumption of drugs without a prescription from a qualified health professional is very common (Pereira *et al*, 2017).

Self-medication is a common practice in the Brazilian population, related to which there are several factors that lead people to self-medicate, such as: familiarity with the medication, previous positive experiences, the symbolic function that the medications have on the popu-

lation, difficulties access to health services and the media itself, by exposing advertisements for medicines, contribute and influence the elderly population to self-medicate (COFEN, 2012).

In this sense, it is questioned: what is the incidence of self-medication among elderly people?

This research aims to know the incidence of self-medication among elders in a municipality in Ceará and to characterize the main factors that contribute to the self-medication of elderly people.

METHOD

It is a descriptive and exploratory research, which will provide to the researcher capturing knowledge and theoretical evidence, based on investigations of certain hypotheses evaluated within a specific reality, the research was carried out with a quantitative approach, in which statistical analyzes were appropriated for data processing (Figueiredo, 2004).

The investigation field was the Juvenal Galdino Rabelo Health Post, Sousa Girão Street, number 374, Girilândia Neighborhood lo-

cated in the municipality of Morada Nova/CE, which significantly enriches the research, as the following Health Post is characterized by being a space that works with elderly people.

Of the 383 elders (population) treated at the Health Center, 144 participated in the survey (sample), selected by simple random probability sampling. Those who did not attend the Health Post and who had no participation were excluded from the sample.

The instrument for data collection was a questionnaire, containing several questions, in which relevant points were evaluated and discussed, which enabled us to know the self-medication indices amongst elders, as well as to know the factors that contributed to the self-medication of the elderly people.

According to (Gil, 2010), the questionnaire, due to its characteristics, constitutes the most appropriate technique for collecting data in public opinion and market surveys.

Data were expressed as mean, standard deviation, minimum and maximum values, as well as simple frequency and percentage calculated using the SPSS statistical softwa-

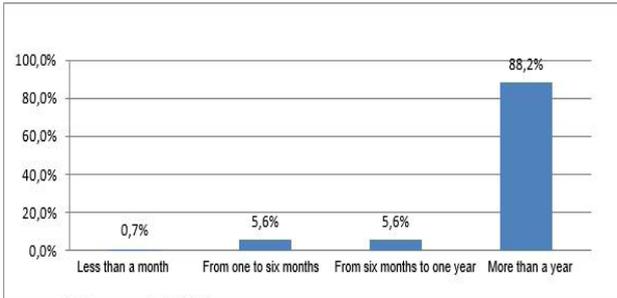
re (Statistical Package for Social Sciences) version 20.0. To check the factors that are associated with self-medication in the elderly, the chi-square test or Fisher's exact test were used. The latter when the expected frequencies are below 5. Values of $p < 0.05$ were considered significant.

The ethical and legal aspects that support this research are in accordance with the Regulatory Guidelines and Norms for Research involving human beings, which is supported by Resolution 466/12. This Resolution is based on the perspective of the individual and the collectives the four basic references of bioethics: autonomy, non-maleficence, beneficence and justice, among others, and aims to ensure the rights and duties that concern the scientific community, the research subjects and to the State (Brasil, 2012).

Resolution 311/07 approves the reformulation of the Nursing Professionals Code of Ethics for application in the jurisdiction of all Nursing Councils, in addition to being carried out by nursing professionals also in excess of elementary nursing activities (COFEN, 2007).

RESULTS

CHART 1 –Time of medication usage.

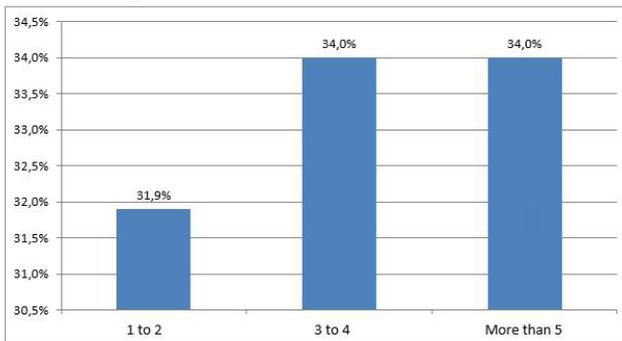


Source: Field research (2013).

According to the survey, it was noticed that the drugs used by the elders have been taken for a long time. Chart 1 shows that 88.2% of the elderly have been

taking medication for more than a year, due to the development of chronic diseases, which makes many elderly people develop tolerance to the medication.

Chart 2 – Quantity of Medication.

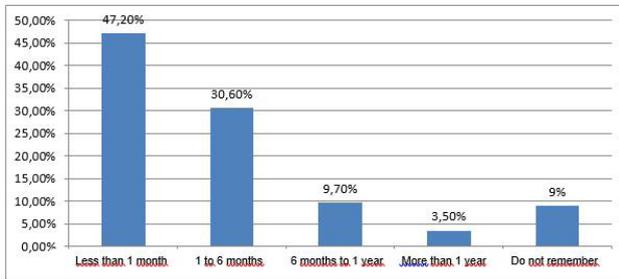


Source: Field research (2013).

According to chart 2, it can be perceived that 68% of the elders who participated in the research take more than three drugs daily, which is a worrying fact,

since the risk of error in the use of the drug and drug interaction increases, given that the vast majority has low education.

Chart 3 – Time past the last consultation.

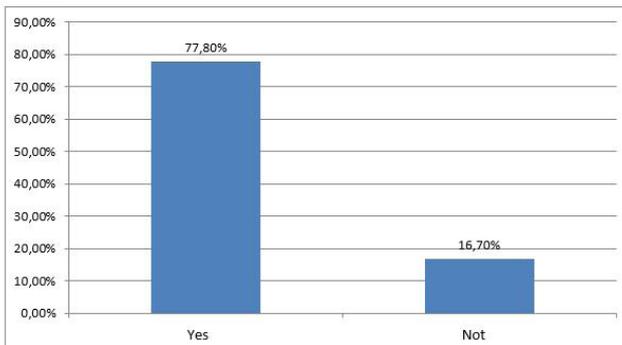


Source: Field research (2013).

According to data in Chart 3, it was found that 47.2% of the interviewees had their last consultation less than a month ago, as they carry out monthly consultations through the program of

the Ministry of Health Hiperdia, which makes it possible to monitor hypertensive and diabetic patients, the vast majority of them are elderly people whose consultations are held monthly

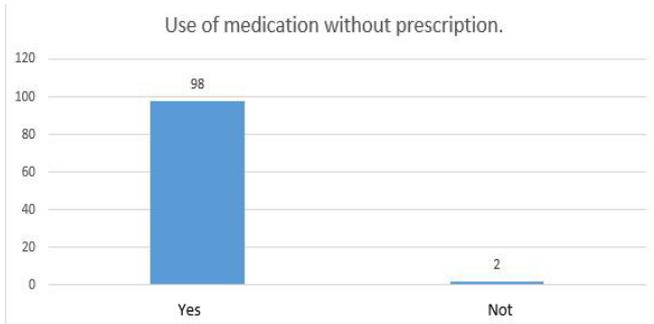
Chart 4 – Capacity of having medication by oneself.



Source: Field research (2013).

According to Chart 4, 77.8% of the research participants stated that they take the drugs without help, which is also a cause for great concern, as the lack of

part, this follow-up can enable the elder to make medication errors, due to the similarity of remedies, decreased visual acuity and approaching schedules.



Source: Field research (2013).

Chart 5 shows that 98% of the survey participants stated that they use drugs without prescription, a worrying fact, given that it is a high rate, can lead to several risks.

DATA DISCUSSION

According to Telles Filho *et al* (2013) the use of medications grows linearly with increasing age and that in society the elderly people are more exposed to polypharmacotherapy, taking, on average, two to five medications a day. In

fact can be justified by the chronic diseases that arise in aging and that require the use of such drugs. It is worth mentioning that, despite not being a unique phenomenon of modernity, the consumption of non-prescription drugs has become a common practice in the Brazilian population.

It is known that the low purchasing power and the precariousness found in health services cooperate so that it is easy to purchase drugs without prescription. Although the policy of access to

medicines in Brazil has undergone a drastic expansion in the last few years after the implantation of SUS, the way in which some financial and administrative health resources are organized at the local level is still insufficient, which increases the search for medicines outside of this public service network in which medical prescriptions are not always mandatory (Luz, 2014).

Self-medication can lead to losses that go beyond spending on medications, delaying diagnosis, adequate therapy, as a consequence of adverse or allergic reactions, and intoxication. It puts the health of the elderly population at risk, in addition to offering risks when associated with prescription drugs, delaying proper diagnosis and often masking serious diseases (Silva *et al*, 2015).

According to (Bortolon *et al*, 2008) in his studies on the elderly, he will also find a very significant number of medicines taken by the elderly daily, with a number of medicines used by them being higher, so the elders are particularly more sensitive to adverse effects, drug interaction and toxicity.

It is estimated that at least 65% of elderly Brazilians are hypertensive. Most of them present isolated or predominant elevation of systolic pressure, increasing pulse pressure, which shows a strong relationship with cardiovascular events. For the treatment of hypertensive elderly people, in addition to risk stratification, it is essential to assess comorbidities and the use of medications. The goal of treatment is to gradually lower blood pressure to levels below 140/90 mmHg. In some very elderly patients it is difficult to reduce the pressure below 140 mmHg, even with good adhesion and multiple agents. In these cases, apart from secondary causes, less marked reductions in systolic blood pressure (for example 160 mmHg) can be accepted (Brazil, 2006).

The error in medication timing, according to (Rang, *et al*, 2007), is that the lack of attention in the use of drugs can trigger a series of effects parallel to the effect that is originally sought, such as: allergic reactions, tachyphylaxis, refractoriness, hepatotoxicity, nephrotoxicity, dependence,

subsequent chronic effects, neurological disorders, in addition, of course, to the multiple concomitant side effects that can even culminate in death.

According to Sá *et al* (2007), the most frequent losses resulting from self-medication include, among others, superfluous expenses, delay in adequate diagnosis and therapy, adverse or allergic reactions, and intoxication. It is also important to point out that some adverse effects are masked, while others are confused with those of the disease that motivated consumption, and create new problems, the most serious of which may lead the patient to hospitalization or death.

The problem of self-medication is universal and old and there is no way to end it. However, there are ways to minimize it, such as guidance programs for health professionals, pharmacists, clerks and the population in general, in addition to adequate inspection and dispensing policies.

In this sense, it is up to professionals in general to search for ways to minimize self-medication through the awareness of the po-

pulation, since health education is a key part so that they can know the risks that may cause their health.

FINAL CONSIDERATIONS

Based on the above, it is evident the need for companions assisting the use of medications to avoid errors in medication intake, as it was seen that most have a low level of education, coupled with the large amount of medications used.

It points to the need for the interprofessional team to carry out health education activities, given that self-medication is closely related to the lack of information.

Another relevant aspect is that despite being a health risk, self-medication is highly prevalent among the elders. In this sense, the need to promote the rational use of medicines in this population segment is emphasized, emphasizing the practice of pharmaceutical care, including health promotion and education.

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CONFLICT OF INTERESTS

There are no conflicts of interests regarding submission of the paper.

REFERENCES

Aziz, M.M., Calvo, M.C.M., & D'orsi, E. Medicamentos prescritos aos idosos em uma capital do Sul do Brasil e a Relação Municipal de Medicamentos. *Cad. Saúde Pública.*, 28(1): 52-64, 2012.

BRASIL. Ministério da Saúde. Hipertensão arterial sistêmica. Brasília: MS, 2006.

BRASIL. Ministério da Saúde. Resolução 466/2012. Aprovar as seguintes diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Brasília: MS, 2012.

Bortolon, P.C., Medeiros, E.F.F., Naves, J.O.S., Karnikowski, M.G.O., & Nóbrega, O.T. Análise do perfil de automedicação em mulheres idosas brasileiras. *Ciência & Saúde Coletiva.*, 13(4):1219-1226, 2008.

CONSELHO FEDERAL DE ENFERMAGEM. Resolução 311/2007. Aprova a Reformulação do Código de Ética dos Profissionais de Enfermagem. Rio de Janeiro, 2007.

CONSELHO FEDERAL DE ENFERMAGEM. Automedicação: a influência dos veículos de comunicação. 2012. Disponível em: http://www.programaproficiencia.com.br/index.php?option=com_content&view=article&id=479.html.

Duarte, L.R., Gianinni, R.J., Ferreira, L.R., Camargo, M.A.S., & Galhardo, S.D. Hábito de consumo de medicamento entre idosos usuários do SUS e de plano de saúde. *Cad. Saúde Coletiva.*, 20(1): 64-71, 2012.

Figueiredo, N.M.A. Método e Metodologia na Pesquisa Científica. São Caetano do Sul: Difusão, 2004.

Gil, A.C. Como Elaborar Projetos de Pesquisa. 5. ed. São Paulo: Atlas, 2010.

Luz, E.P. Perfil sociodemográfico e de hábitos de vida da população idosa de um município da região norte do Rio Grande do Sul, Brasil. *Rev. brasileira geriatra gerontologia.*, 17(2): 303-14, 2014.

Monteiro, O.R.B., Figueiredo, N.R., Marreiros, M.Ó.C., & Figueiredo, M.L.F. Polifarmácia entre idosos assistidos pela estratégia saúde da família. *Rev. enfermagem UFPI.*, 3(2): 56-61, 2014.

Pereira, D.T.M., Vasconcelos., Neto, E.V., & Cruz, N.P.S. Perfil da automedicação entre idosos assistidos por unidades básicas de saúde. *J. Nursing UFPE on line.*, 8(11): 3868-73, 2014.

Pereira, F.G.F., Araújo, M.J.P., Pereira, C.R., Nascimento, D.S., Galiza, F.T., & Benício, C.D.A.V. Automedicação em idosos ativos. *Rev. enfermagem UFPE on line.*, 11(12):4919-28, 2017.

Oliveira, M.A., Francisco, P.M.S.B., Costa, K.S., & Barros, M.B.A. Automedicação em idosos residentes em Campinas, São Paulo, Brasil: prevalência e fatores associados. *Cad. Saúde Pública.*, 28(2): 335-45, 2012.

Ramos, L.R. A explosão demográfica da terceira idade no Brasil: uma questão de saúde pública. *Rev. gerontologia.*, 1(1):3-8, 2013.

Rang, H.P., Dale, M.M., & Ritter, J.M. *Farmacologia*. 6ª ed. Rio de Janeiro: Elsevier, 2007.

Rezende, A.C., Carrillo, M.R.G., & Sebastiao, E.C.O. Queda entre idosos no Brasil e sua relação com o uso de medicamentos: revisão sistemática. *Cad. Saúde Pública.*, 28(12): 2223-35, 2012.

Sá, M.B., Barros, J.A.C., & Sá, M.P.B.O. Automedicação em idosos na cidade de Salgueiro-PE. *Rev. Brasileira Epidemiologia.*, 10(1): 75-85, 2007.

Silva, P.A., Silva, K.O., Mascarenhas, G.D.M., & Faria, L.A. Aspectos relevantes da farmacoterapia do idoso e os fármacos inadequados. *InterScientia.*, 3(1):31-47, 2015.

Telles Filho, P.C.P., Almeida, A.G.P., & Pinheiro, M.L.P. Automedicação em idosos: um problema de saúde pública. *Rev. Enfermagem UERJ.*, 21(2): 197-201, 2013.

Vernisi, M.V., & Silva, L.L. A prática de automedicação em adultos e idosos: uma revisão de literatura. *Rev. Saúde e desenvolvimento.*, 10(5): 53-72, 2016.