Abstract

Introduction: Aging is accompanied by changes that contribute to aged people needing increased pharmacotherapy. Objective: It was aimed to identify the difficulty of understanding by aged patients regarding the prescription of medicines in Primary Care in the city of Fortaleza (CE). Methods: This is a descriptive and cross-sectional study with a quantitative approach, carried out in a Primary Health Care Unit (UAPS) in the city of Fortaleza-CE. A structured questionnaire was applied to 105 aged people. The interviews took place between the months of September to October 2019. Results: The results showed that the female gender was prevalent in 88 (83%) participants, the self-perception of the predominant health was regular with 39 (40.95%) members and 100 (95.2%) aged individuals use continuous medication. A portion of 78 (74.28%) participants knew the name of the drug and 83 (79.04%) knew its indication. As for the dosage, 83 (80.95%) knew how to take the medication and 41 (39.05%) did not know how to proceed in case of forgetting to take it, 51 (53.54%) were unaware of the side effects, and 30 (28.58%) needed more information about the treatment. Conclusion: It is concluded that there is a gap between the knowledge of aged patients and the knowledge regarding their medicines/treatment, requiring greater attention to the pharmacological aspects of the treatment and information in a clear, didactic, and objective way.

Keywords: Aged; Primary Health Care; Prescriptions; Aging; Pharmaceutical preparations.
INTRODUCTION

Aging is considered a progressive and natural process that depends on a group of morphological, physiological, and psychological changes, in addition to being individual and irreversible. However, it cannot be considered a pathological state, consisting in the degeneration of a mature organism. The Elderly Statute says that a person aged 60 years old or older, of both genders, regardless of color, ethnicity or ideology, can be considered aged.\textsuperscript{1,2}

Worldwide, in recent years, the aged population has been growing at an accelerated pace. This fact is due to the decrease in mortality and fertility rates. This longevity could also be observed in Brazil and resulted in an increase in the demand for health services, mainly due to the aggravation of pathological processes and physiological changes typical of age, which contribute to the need for increased pharmacotherapy among the aged people.\textsuperscript{3,4}

In 2012, the National Household Sample Survey (\textit{Pesquisa Nacional por Amostra de Domicílios} – PNAD) revealed that the Brazilian population continued to age, as it had gained 4.8 million aged people in just the previous five years, reaching the mark of 30.2 million in 2017. According to this logic, predictions show that, in 2025, Brazil should come to occupy the sixth place in the world classification of the aged.\textsuperscript{5}

Among the most relevant diseases in this category are systemic arterial hypertension (SAH) and diabetes \textit{mellitus} (DM), both highlighted in the scenario of chronic diseases as the main risk factors for

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Resumo

Introdução: O envelhecimento é acompanhado por mudanças que colaboram para que os idosos precisem de farmacoterapia aumentada. Objetivo: Objetivou-se identificar a dificuldade de compreensão do paciente idoso quanto à prescrição de medicamentos na Atenção Primária na cidade de Fortaleza (CE). Métodos: Trata-se de um estudo descritivo e transversal com abordagem quantitativa, realizado em Unidade de Atenção Primária à Saúde (UAPS) na cidade de Fortaleza/CE. Foi aplicado questionário estruturado em 105 idosos. As entrevistas aconteceram entre os meses de setembro e outubro de 2019. Resultados: Os resultados demonstraram que o sexo feminino foi prevalente em 88 (83%) participantes, a autopercepção da saúde predominante foi a regular com 39 (40,95%) membros e cem (95,2%) idosos fazem uso de medicamento continuo. Uma parcela de 78 (74,28%) conhecia o nome do medicamento e 83 (80,95%) sua indicação. Quanto à posologia, 83 (80,95%) sabiam como tomar a medicação e 41 (39,05%) não sabiam como proceder em caso de esquecimento, 51 (53,54%) não conheciam os efeitos colaterais e 30 (28,58%) necessitavam de maiores informações sobre o tratamento. Conclusões: Conclui-se que existe uma lacuna entre o conhecimento do paciente idoso e o conhecimento a respeito dos seus medicamentos/tratamento, necessitando-se de maior atenção aos aspectos farmacológicos do tratamento e ao fornecimento de informação de forma clara, didática e objetiva.

Palavras-chave: Idoso; Atenção Primária em Saúde; Prescrições médicas; Envelhecimento; Medicamentos.

Resumen

Introducción: El envejecimiento se acompaña de cambios que contribuyen a que los ancianos necesiten una mayor farmacoterapia. Objetivo: Estaba destinado identificar la dificultad de comprensión del anciano en cuanto a la prescripción de medicamentos en Atención Primaria en la ciudad de Fortaleza (CE). Métodos: Esto es de un estudio descriptivo y transversal con enfoque cuantitativo, realizado en Unidad de Atención Primaria de Salud (UAPS) en la ciudad de Fortaleza-CE. Se aplicó un cuestionario estructurado a 105 adultos mayores. Las entrevistas se realizaron entre los meses de septiembre a octubre de 2019. Resultados: Los resultados arrojaron que el sexo femenino fue predominante en 88 (83%) participantes, la autopercepción de la salud predominante fue regular con 39 (40,95%) afiliados y 100 (95,2%) ancianos utilizan medicación continua. Una parte de 78 (74,28%) conocía el nombre del fármaco y 83 (80,95%) su indicación. En cuanto a la dosificación, 83 (80,95%) sabía tomar el medicamento y 41 (39,05%) no sabían cómo proceder en caso de olvido, 51 (53,54%) desconocían los efectos secundarios y 30 (28,58%) necesitaba más información sobre el tratamiento. Conclusión: Se concluye que existe un desfase entre el conocimiento del anciano y el conocimiento al respecto de sus medicamentos/tratamiento, requiriendo mayor atención a los aspectos farmacológicos del tratamiento e información de forma clara, didáctica y objetiva.

Palabras clave: Anciano; Atención Primaria de Salud; Prescripciones; Envejecimiento; Medicamentos.
the onset of complications; consequently, this group is routinely in the doctor’s office.6,7 Thus, according to the Federal Council of Medicine, medical consultation encompasses anamnesis, physical examination, possible diagnoses, requesting tests, and prescribing treatment.8

In this context, the ideal prescription should encompass few drugs, with diminished or non-existent side effects, have no contraindication, as well as have a quick response, adequate dosage form, an easy-to-understand dosage, and short length.9 This is because an improper prescription of a drug can increase the risk of adverse reactions, causing complications and even death of the patient. Mistakes in prescription can be generated by factors such as negligence in the face of terrible working conditions and lack of attention from the prescriber.10 In addition, several factors hinder successful communication between prescriber and patients, such as, for example, the recurrent use of technical and scientific language by professionals, making it impossible for patients to understand, the lack of information about the disease and/or treatment, illegible handwriting, and lack of standardization for prescribing.11

Patients must have, in addition to exact diagnosis and correct prescription, essential information to use the drugs according to the prescriber’s intention. Doubts about prescription can lead patients to error or to abandon the therapy.9 Therefore, the importance of this work is given by the need to sensitize professionals about the importance of clear and adequate guidance on their medical prescription, so that patients, especially aged ones, leave the consultation aware and oriented.

In this way, the objective of this work was to identify the problems that make it difficult for aged patients to understand their medication prescription in Primary Care in the city of Fortaleza, Ceará.

METHODS

Study design and location

The study was carried out preserving the data of all respondents, as well as their anonymity, and respecting Resolution 466/2012. The study was approved by the Ethics Committee of Escola de Saúde Pública do Ceará (ESP/CE), with an opinion registered in the National Information System on Ethics in Research involving Human Beings (Certificate of Presentation for Ethical Assessment — CAAE No. 29073419.2. 0000.5037).

The research is a descriptive and cross-sectional study with a quantitative approach, carried out at the Primary Health Care Unit (Unidade de Atenção Primária à Saúde – UAPS) Professor Anísio Teixeira, located in the city of Fortaleza, Ceará. This unit serves a population of 28,000 individuals and performs approximately 3,600 consultations per month. In addition, it has a multi-professional team, operating regularly from 7:00 am to 7:00 pm, from Monday to Friday.

This UAPS was chosen due to its large flow of patients, offering a favorable environment for data collection in addition to being a familiar place for the researcher. Data collection took place in the first quarter of 2020, in the afternoon, from Monday to Friday.

Study population and casuistry

The sample consisted of patients aged between 60 and 80 years old, of both genders. A total of 300 potential participants compatible with the research design were identified. The alignment of the
interviewees included aged people who had medical care and received a prescription, knew how to read and write, were able to dialogue properly, that is, used language as a precious tool to make themselves understood and, thus, achieve the goal of human interaction, and who agreed to participate in the study by signing the Informed Consent.

Participants who presented a prescription on behalf of third parties, those who had already been treated at the pharmacy, and those who refused to carry out the interview, including questionnaires answered by caregivers or companions, as well as patients who did not belong to the coverage area of the UAPS, were excluded from this research.

Data collection

The collection was carried out through interviews using a standard collection instrument, which assesses the patients’ knowledge about various items related to the use of drugs, such as the continuous use of drugs, obtaining information, and the form of use. The questionnaire consisted of 14 closed questions, six for defining the profile of the interviewees, three related to reading the prescription, and five related to important points for the correct drug treatment.

Participants were approached for the research after medical consultation in the common areas of that institution. For that, they were exposed to a summary on the topic and purpose of this research. Soon after, the questionnaire was applied.

Data analysis

The variables analyzed were the characterization of demographic data, the prevalence of diseases, and the evaluation of medication use. The data collection instrument was manually filled in by the researcher and later coded and registered in a database, processed in the Microsoft Office Excel 2007 program. The results were presented in tables and graphics with frequency distribution and percentage rate.

RESULTS AND DISCUSSION

The results obtained from the structured questionnaire used for this research are shown in Table 1. After applying exclusion criteria, 105 aged people were interviewed and it was found that 88 (83%) of them were female. This corroborates the idea that, when it comes to the continuous use of medication, male individuals

Table 1. Profile characterization of aged patients interviewed after medical consultation at a Primary Health Care Unit in Fortaleza (CE), 2020.

<table>
<thead>
<tr>
<th>Participants profile</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>17</td>
<td>16.19</td>
</tr>
<tr>
<td>Female</td>
<td>88</td>
<td>83.81</td>
</tr>
<tr>
<td>Age range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60–70 years</td>
<td>87</td>
<td>82.85</td>
</tr>
<tr>
<td>71–80 years</td>
<td>18</td>
<td>17.15</td>
</tr>
</tbody>
</table>
present little demand for health services, possibly due to cultural aspects and difficulties in adopting self-care practices. This is because, as men are seen as virile, invulnerable, and strong, the search for health services, from a preventive perspective, could be associated with weakness, fear, and insecurity.\textsuperscript{12}

Our results also show that there is a higher prevalence of respondents aged between 60 and 70 years, or 87 (82.85\%) participants. This fact is confirmed by previous studies, which show that, in Brazil, this population is more assiduous in the medical office because of increasing age, a moment in which many causes of frailty and risks for these individuals appear, such as: multiple pathologies, precarious economic situation, and adverse drug reactions.\textsuperscript{13,14}

As for the health assessment by the interviewees, it was observed that 39 (40.95\%) of them considered their health to be regular (Figure 1), confirming the results of previous studies.\textsuperscript{15,16} However, research carried out in developed countries showed that the self-assessment of health is strongly influenced by the socioeconomic situation of the aged and/or their family, since the greater their purchasing power, the more access they will have to exams, as well as the use of medicines that are not available in the Unified Health System (\textit{Sistema Único de Saúde} – SUS); consequently, they better evaluate their health.\textsuperscript{14,17}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{Patients’ own health assessment in a Primary Health Care Unit in Fortaleza (CE), 2020.}
\end{figure}

The aged population undergoes changes in health profiles characterized by the increase in the frequency of non-communicable chronic diseases, which modifies the need to provide comprehensive and more effective care for the aged population.\textsuperscript{18} With regard to health problems presented by respondents,
a high prevalence of chronic diseases such as SAH and DM was observed, representing 79% (83) and 45% (47) of them, respectively (Figure 2). This confirms observations previously carried out with the aged population, in which the two diseases are highlighted in the scenario of chronic diseases as the main risk factors for the appearance of complications, which brings aged people to routinely visit the doctor’s office.17,19,20

![Figure 2. Diseases with the highest prevalence among respondents in a Primary Health Care Unit in the city of Fortaleza (CE), 2020.](image)

Epidemiological studies have shown not only the increase in the prevalence of hypertension with age, but also its occurrence in association with other risk factors, such as lifestyle and eating habits, all associated with a higher probability of occurrence of cardiovascular diseases. According to a study in Brazil,21 these are responsible for 33% of deaths with known causes, in addition to corresponding to 29% of hospitalizations in the public sector of individuals aged 60 years old or older.22

In Figure 3, there is a total of 100 patients (95.2%) who use some medication continuously. In this context in which the aged population has greater participation, there is a need for changes in the health care model, especially in relation to pharmaceutical care provided to the aged population.23 This result is similar to that observed in previous pharmacoepidemiological studies carried out in Brazilian cities, since, with longevity, the aggravations of the clinical condition and other pathologies arise making these aged people strong candidates for polypharmacy, as the use of continuous medication by the aged is virtually unanimous and frequent.24,25
This scenario leads to another important point that can be observed in several works on this topic: the relationship between aging and polypharmacy. The high number of prescribed drugs and the greater burden of disease are common elements among the aged; in addition, they are related to risks such as lower adherence to treatment and error in daily administration, given the large number of drugs consumed simultaneously.26,27

Another question carried out in this research was with which professional patients clarify their doubts about their medical prescription. A large part, or 73 (69.52%) of the participants, reported solving doubts with the doctor, followed by 49 (46.66%) who asked questions to a nurse, and 25 (23.80%) with a clerk and pharmacist. (Figure 4). This research, as well as that of Rantucci28 and Araújo and Alves,3

![Figure 3](image-url) Continuous use of medication among patients interviewed at a Primary Health Care Unit in the city of Fortaleza (CE), 2020.

![Figure 4](image-url) Professional requested to clarify the medical prescription in a Primary Health Care Unit in the city of Fortaleza (CE), 2020.
observed that patients often leave consultations without clearing all their doubts, requiring the search for other professionals. In addition, for Pinto et al.,\textsuperscript{29} this fact is probably due to the great complexity of drug names, as they usually do not resemble any word in the patients’ vocabulary, leading to difficulties in memorizing and pronouncing them. Regarding this problem, Vianna et al.\textsuperscript{30} describe the existence of social, cultural, and linguistic obstacles that separate physicians from aged patients, especially those belonging to the lower classes. This communication barrier is the result of the recurrent use of specialized medical vocabulary, which highlights the differences and barriers in communication and consequently causes patients to misunderstanding important information and recommendations related to the disease, treatment, and adherence.

As for pharmacists, the number of these professionals is still insufficient, with only one professional responsible for a population of about 20 to 40,000 people.\textsuperscript{31} This scarce number of pharmacists in Primary Health Care may explain the fact that this professional has been little mentioned as responsible for providing guidance on medications.\textsuperscript{29}

According to Vieira,\textsuperscript{32} the improvement of prescription, the act of dispensing drugs, and their administration by the aged should be a priority in care programs for this class. Public services, governments, and leaders discuss the issue of drug supply and financing strategies, but few recognize that drugs are just an instrument for providing a service and are generally not concerned with the structuring and organization of this service. This highlights the importance of pharmacists, since they are absent in most pharmacies of basic health units, compromising the quality of care.

As for the interpretation of the prescription, some questions were asked, which can be seen in Table 2. A portion of 78 (74.28\%) aged people knew the name of the drug, while 27 (25.72\%) did not.

<table>
<thead>
<tr>
<th>Participants profile</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knows the name of the drug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>78</td>
<td>74.28</td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>25.72</td>
</tr>
<tr>
<td>Knows what the drug is for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>83</td>
<td>79.04</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
<td>20.96</td>
</tr>
<tr>
<td>Knows how to take the drug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>85</td>
<td>80.95</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>19.05</td>
</tr>
<tr>
<td>Knows what to do if they forget to take the drug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>64</td>
<td>60.95</td>
</tr>
<tr>
<td>No</td>
<td>41</td>
<td>39.05</td>
</tr>
<tr>
<td>Knows whether the drug causes any side effects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>49</td>
<td>46.66</td>
</tr>
<tr>
<td>No</td>
<td>56</td>
<td>53.34</td>
</tr>
<tr>
<td>Needs more information about the treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>30</td>
<td>28.58</td>
</tr>
<tr>
<td>No</td>
<td>75</td>
<td>71.42</td>
</tr>
</tbody>
</table>
not know. However, a difference has already been observed, as in the same category of individuals, most respondents did not know the name of the medication, which can cause medication change and other errors in its use.\textsuperscript{33} Pinto et al.\textsuperscript{29} state that the lack of effective strategies in the transmission of information from health professionals to patients and/or the lack of understanding of such information can have serious consequences, such as inadequate adherence, which can worsen clinical condition.

Also according to Table 2, 83 (79.04\%) participants knew the benefits of the medication, while 32 (31.37\%) aged people, even with the prescription in hand, did not know them, requiring further clarification. Although this study does not present enough variables to correlate the difficulty of understanding with socioeconomic conditions, this fact is pointed out by some studies\textsuperscript{29,34}, with schooling as a priority predictor. According to a Brazilian study, understanding of medical prescription information may be associated with individuals’ education, as lower levels of schooling and dependence on medication use are factors independently associated with understanding pharmacotherapy.\textsuperscript{29} Patients with lower education have difficulty reading, memorizing, and understanding instructions, in addition to poor understanding of the information provided by health professionals.\textsuperscript{34}

This result was similar to those of other studies\textsuperscript{35,36} which also reached the result that the majority of respondents did not know the indication of the drug. The lack of basic information about the drugs can lead individuals to error and cause a worsening in the patients’ clinical condition, resulting in hospitalization or more serious sequelae. The absence of pharmacists also has a negative impact, as they are the appropriate professionals to provide such guidelines and assistance to the aged.\textsuperscript{37}

Another parameter analyzed (Table 2) was whether aged people knew how to take their prescribed medication. Eighty (80.95\%) knew how and 25 (19.05\%) did not know, a result that differed from the data collected from other studies, in which there was a lack of knowledge about the dose of the drug.\textsuperscript{35-37}

Another question carried out according to Table 2 was whether interviewees knew what to do in case they forgot to take any of the prescribed medications, and it was observed that 41 (39.05\%) aged people did not know how to proceed, corroborating results found by other authors\textsuperscript{17,37} and that could be correlated with lapses in the patients’ memory, a high number of information caused by the complexity of the prescription or a reduced number of information not included in professional care due to the exhaustive routine and the high number of patients seen in a short period of time. Thus, care with possible risks to aged patients as consequences of the irrational use of the drug, such as adverse reactions and drug interactions, is emphasized.

With regard to the knowledge of the aged regarding adverse effects of prescribed drugs, it was found that 49 (46.66\%) aged people knew about them (Table 2). This result is similar to that observed in previous studies, which relate this fact to the lack of effective communication at the time of consultation.\textsuperscript{35-37} This is because, in general, medical consultations are short, causing professionals to prioritize providing information about name, dose, and frequency of drug use, to the detriment of information about adverse effects.\textsuperscript{38}

The last question addressed the interviewees regarding the need for more information about their treatment, reaching the result of 30 (28.58\%) aged people who lacked information about their drug therapy and 75 (71.42\%) who reported full understanding of the treatment. This lack of understanding about the drug therapy prescribed to patients, according to other studies,\textsuperscript{35,36} can have numerous consequences, including early return to the office, carrying out new tests, worsening cases, and the emergence of possible sequelae by complications.
CONCLUSION

Due to the data mentioned in this research, it can be observed that there is a gap between what aged patients know and what they should know about their medications and treatment — basic information such as the name of the medication, dose, indication, adverse effects, and general recommendations. This, consequently, has a positive influence on the health-disease process, since it increases the risk of non-adherence to treatment, making clear the importance of professionals in this care process.

This study contributed to this scenario by demonstrating the need to expand structural measures that minimize difficulties in understanding prescriptions. Among these measures, we highlight the change in the pedagogical attitude of the professionals, the reduction of the complexity of the treatments when possible, and the greater attention on the part of health professionals (prescribers and dispensers of medicines) in transferring information, to guarantee the rational use of medicines, especially by patients deprived of information and with lower education.

CONFLICT OF INTERESTS

Nothing to declare.

AUTHORS’ CONTRIBUTIONS

RBP: Project administration, Formal analysis, Conceptualization, Data curation, Writing – original draft, Writing – review & editing, Investigation, Methodology, Funding acquisition, Resources, Software, Supervision, Validation, Visualization. ECS: Writing – review & editing, Investigation, Methodology, Resources, Software, Supervision, Visualization. DSM: Formal analysis, Conceptualization, Writing – review & editing, Investigation, Methodology, Funding acquisition, Resources, Software, Supervision, Validation, Visualization. MGC: Project administration, Formal analysis, Conceptualization, Data curation, Writing – original draft, Writing – review & editing, Investigation, Methodology, Funding acquisition, Resources, Software, Supervision, Validation, Visualization.

REFERENCES