# FACTORS RELATED TO ADHESION TO PHARMACOLOGICAL TREATMENT BY SENIORS IN PRIMARY HEALTH CARE

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## **ABSTRACT**

Objective: To identify factors related to adherence to pharmacological treatment by the elderly people in Primary Health Care. Method: It is a descriptive study developed with a team of the Family Health Strategy, in a municipality in northwestern Paraná. Data were collected in June and July 2018, through a questionnaire applied at home visit. Subsequently, the data were recorded, organized in spreadsheets and submitted to descriptive statistics. Results: Among the 118 elderly participants, 61.1% were female, 78.8% were between 60 and 69 years old, 59.3% had up to eight years of schooling, 12.2% had some physical disability, 9, 7% needed help to use medication, 60.1% were taking medication as prescribed, 12.1% had already used medication changed, 39.8% used 1 to 3 medications prescribed by the doctor, 50% reported Self-medication, 84.7% reported knowledge of the indication of all medications, 5.1% indicated that the greatest difficulty in adhering to treatment is that the medication is not provided free of charge. Conclusion: Given the factors highlighted by the participants as influential in adherence to drug treatment, it is necessary that professionals and managers jointly establish strategies to facilitate access to the necessary drugs for seniors.

Keywords: Health services for seniors. Elderly people's health. Medicationa dherence. Patient medication knowledge.

### INTRODUCTION

The aging of the population in recent decades and the increase in chronic conditions due the demographic epidemiological transition associated with improvements in therapeutics, which consequently led to increased life expectancy of people over  $60^{(1,2)}$ .

In this regard, the elderly people represent the age group with the highest rates of noncommunicable chronic disease (NCD), being responsible for the highest prevalence<sup>(3)</sup>. This scenario characterizes the need for education for health promotion and prevention of complications, and with the increase in the search for specific treatments for the elderly population, the practice of polypharmacy has become common. A population-based study showed a reduction in self-medication from

42.3% in 2006 to 18.2% in 2010, however, it should be noted that many medications are considered inappropriate for use in seniors, as they may be accompanied by adverse reactions and hospitalizations<sup>(4)</sup>. Cross-sectional and retrospective study whose objective was to actively search for suspected adverse reactions in the elderly people seeking emergency room pointed out that the main medications were those used for the alimentary tract and cardiovascular system<sup>(5)</sup>.

In Brazil, research indicates that in some regions over 40% of the elderly people use potentially inappropriate medications (6). In addition, there are other errors associated with the use of medication by the seniors, such as the use of non-prescription medication or selfmedication, and consequent iatrogenesis resulting from improper prescription or misdiagnosis, medication not appropriate for

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age, drug-food interaction, therapeutic duplication, improper combination of drugs, incorrect dosage or interval, and lack of knowledge of the user or healthcare professional accompanying the drug in use<sup>(7)</sup>.

A study, which aimed to estimate the frequency of non-adherence to drug treatment among elderly outpatients followed by the Family Health Strategy team, found an association of non-adherence to the absence of employment prior to retirement, presence of cognitive decline and inappropriate eating habits<sup>(8)</sup>. Thus, the question is: what factors contribute to non-adherence pharmacological treatment? Given this, the present study aims to identify the factors related to adherence to pharmacological treatment by the elderly people in Primary Health Care.

## **METHOD**

It is a descriptive study, developed with a team of the Family Health Strategy (FHS), in a municipality of northwestern Paraná. At the time of the study, the population assigned to the team was 4,100 people, 320 seniors. Of these, 190 used continuous medication. For sample calculation, a sampling error of 5% and a confidence interval of 95% were considered, resulting in a sample of 127 elderly people.

All the elderly patients on continuous medication were invited to participate in the study, and after assessing their mental state with the use of the mini-exam <sup>(9)</sup>, 118 were classified with complete cognitive ability and answered the questionnaire developed by the researcher.

For sample selection, the following inclusion criteria were observed: being 60 years old or older; registered in the ESF team; make use of continuous medication; and possess cognitive ability within normal parameters according to the Mini Mental State Examination (MMSE)<sup>(9)</sup>.

Due to the influence of educational level on the MMSE total scores <sup>(9)</sup>, we used cut-off scores for people with different levels of education, that is, 20 points for illiterates; 25 points for people with schooling from 1 to 4 years; 26.5 for 5 to 8 years; 28 for those aged 9 to 11 years and 29 for more than 11 years, considering the recommendation to use higher section scores<sup>(10)</sup>.

The questionnaire contained 16 objective questions about the following aspects: socioeconomic profile, self-care, physical disabilities, medications used and level of knowledge about them, need to purchase and store medicines. The questionnaire was applied by the researcher through a home visit previously scheduled and brokered by the Community Health Agent (ACS) of the micro area. Data were collected in June and July 2018 and were recorded, organized and analyzed using descriptive statistics software *Epinfo*.

Initially, the permission was sought from the local Department of Health. Data were collected after approval by the Human Research Ethics Committee of the State University of Maringá under opinion No. 2,891,977 according to Resolution 466/2012 and 510/2016. Participants were informed about the study and those who agreed to participate, gave their consent through the Informed Consent Form.

# **RESULTS**

118 participants answered questionnaire, of which 61.1% (n = 72) were female; 78.8% (n = 93) were between 60 and 69 years old, 10.2% (n = 12) 70 to 79 years old and 11.1% (n = 13) over 80 years old. Regarding education, 0.8% (n = 01) never studied, 29% (n = 34) had up to four years of schooling, 59.3% (n = 70) had between five and eight years of schooling, 8,3% (n = 10) between nine and 11 years of schooling and 2.6% (n = 03) over 11 years of schooling. Regarding occupation, housing and family income, 75.4% (n = 89) were retired, 89.8% (n = 106) had their own residence, 99.2% (n = 117) lived together and the average family income was one to two minimum wages.

When asked about having a physical disability, 12.2% (n = 14) reported reduced hearing acuity and 73.2% (n = 86) visual acuity. In addition, 14.6% (n = 17) reported motor impairment. Of these, 10.2% (n = 12)

reported that they need help with medication administration and 5.1% (n = 06) are assisted by their spouse, 2.5% (n = 3) by the caregiver and 2.5% (n = 03) by the children. When asked what kind of aid received, 5.1% (n = 06) reported that the drug is separated by time and

5.1% (n = 06) claimed that the drug is delivered by hand or administered by another person. The information presented regarding adherence to treatment by participants is presented in Table 1.

**Table 1.** Adherence to drug treatment in the elderly people.

-	Always	Almost always	Sometimes	Almost never	Never
How often do you use medications at the doctor's prescribed times?	60,2% (n=71)	34,7 (n=41)	-	5,1% (n=06)	-
How often do you stop taking the medicine prescribed by the doctor?	-	-	0,9 (n=01)	28,84% (n=34)	70,34 (n+83)

The reasons for the inappropriate use of medication were forgetfulness (25.4%) (n = 30), the fact of not having the medication at the moment (10.2%) (n = 12) and feeling good (5, 1%) (n = 06), and 59.3% (n = 70) never stopped taking for any reason. Another problem presented was the use of changed medications, reported by (12.7%) (n = 15) of the elderly people.

When asked about the greatest difficulty facing the correct adherence to treatment, respondents mentioned the fact that the medication was not provided free of charge (18 - 15.2%), could not take the medication at the correct time (06 - 5.1%), and forgetfulness (29-24.6%), and (65 - 55.1%) has no difficulty.

Regarding the amount of medicines in use that were prescribed by a doctor, 40.7% (n = 48) use one to three medicines, 39.8% (n = 47) from four to six and 19.5% (n = 23) from five to seven. As for medications in use that were not prescribed by a medical professional, 50.0% (n = 59) of the elderly people use one to three and 50.0% (n = 59) do not use prescription drugs.

Regarding knowledge about the drugs used, 84.8% (n = 100) informed that they know the indication of all medicines in use and 15.2% (n=18) know about most.

Regarding the guidance received in the health services, 94.9% (n=112) reported that they received guidance on the use of medications during care in these services, and

in 55.4% (n=62) of the times the guidance was given by medical professionals and 44.6% (n=50) of the time by nursing team professionals. Still on this subject, 12.7% (n=15) leave doubts in most consultations, 21.2% (n=25) in half of consultations, 5.1% (n=06) in less than half of consultations, 27.1% (n=32) reported leaving the doctor's office without question about the use of prescription drugs and 33.9% (n=40) with doubts in all consultations. Most respondents (84.7%) (n=100) take previous prescriptions on new appointments.

In everyday life, when there is any doubt about the use of medicines 5.1% (n = 06) seeks information with family members, 5.1% (n = 06) with Community Health Agents (ACS), 34, 7% (n = 41) seeks nursing professionals, 39.8% (n = 47) doctors and 15.3% (n = 18) pharmacists.

Regarding the purchase of medicines, 60.1% (n = 71) of the seniors informed the need to buy medicines, and of these 15.5% (n = 11) buy all medications, 9.9% (n = 07). ) buy more than half, 18.3% (n = 13) buy half and 56.3% (n = 40) less than half.

The storage of medicines is performed in a specific box by 29.7% (n = 35) of the seniors, and 70.3% (n = 83) are stored in a clean and dry container, but do not have a specific box for storage the medicines.

# **DISCUSSION**

The elderly population represents 12.9% of the total population in Brazil <sup>(2)</sup>, similar to the reality of the state of Paraná, which has 14.9% of this age group <sup>(2)</sup>. Population aging generates an increase in the demand for specific health services for this population in the Unified Health System (SUS), which reflects the planning and current priorities of public policies <sup>(11)</sup>.

In this sense, it is important that these policies have integrated and inter-sectoral interventions that enable the development of actions to promote healthy aging and disease prevention. This increase in longevity is associated with weakening aging and makes elderly more vulnerable to the the physical development of dementia. disabilities, increased chronic diseases and, consequently, increased use of medications (12).

Each municipality has responsibilities for the pharmaceutical care of SUS users, especially among the elderly people, with actions that facilitate care and accessibility to the drug. The strategy would be to broaden the knowledge and use of the Popular Pharmacy Program in Brazil and also to improve the dissemination of the program's drug list to users and doctors. This responsibility is required to be fulfilled, as it can avoid unnecessary expenditures on medicines, travel and even low adherence to therapy in the low-income population<sup>(13)</sup>.

The average of eight years of study is higher than the average of Brazil (3.4 years) (2), even though it is considered a low level of education, which can make it difficult to understand guidelines and read prescriptions. As for living together, previous studies conducted in Brazil (12,13) have shown that this fact assists in the supervision of medication use and can avoid errors, in addition to allowing the observation of their adverse effects.

The average income ranged from 1 to 2 minimum wages; this is an advantage if it is compared to the income of older people from other regions of the country, since the south and southeast regions have higher income compared to several states in Brazil (14). An important factor to be considered for adherence to drug treatment among elderly

people with chronic diseases, and it is the responsibility of the health team to evaluate the economic conditions and the difficulties in obtaining the necessary medications for this population<sup>(15)</sup>.

In a multidimensional way, the seniors are vulnerable in relation to their health condition, which results in several outcomes in functional impairment and environmental stressors, which can lead to limitations in the performance of activities of daily living. Weakness regarding adherence pharmacological therapy has been observed to decrease visual and hearing acuity, which contribute to the occurrence of failures in the therapeutic response, as well as to the appearance of unwanted effects (4). Visual deficits may cause difficulty in reading the information or drug labels, and hearing and cognitive deficits can be an obstacle to understanding verbal guidelines. In turn, joint or functional impairment may prevent the manipulation of packaging medications themselves<sup>(5)</sup>.

It was observed that few elderly people reported the need for help with the consumption of medication, but it is necessary to consider that this study addressed only elderly with normal cognitive ability. Autonomy<sup>(16)</sup> and independence from the point of view of the seniors are components for healthy aging, and both are related to financial security<sup>(17)</sup>. In fact, financial security is one of the main components for healthy aging<sup>(18)</sup>. Considering low income and drug spending, it is assumed that this financial security is threatened among the survey participants.

Forgetfulness was the main reason reported for not using the medication at the doctor's prescribed times, tacit to the speeches and other studies already performed <sup>(19)</sup>. It is important to involve the family/caregiver in the care and may share the responsibility for the control of medication schedules. In addition, the health professional can agree with the elderly people/family simple goals such as setting the alarm clock to assist them in meeting the schedule.

The total amount of drugs used by an individual is what characterizes polypharmacy and this amount is not precisely defined in the

literature, ranging from two to six drugs. In the state of Paraná, the number of five drugs to polypharmacy adopted is Polypharmacy has a direct impact on hospital admissions and adverse drug reactions, and the use of inappropriate drugs can lead to an iatrogenic cascade, impairing treatment adherence of falls, balance and risk impairment, and even minor injuries, or even death, causing negative impacts on the elderly's quality of life<sup>(19,20)</sup>.

However, participants reported knowledge about the medicines in use and guidance from health services on treatment. Other studies, however, have shown that the elderly do not know the side effects to which they are exposed, as well as the minimal care necessary for the administration of medications (21). Poor adherence to pharmacological therapy or inappropriate use of drugs by the elderly may be associated with a higher risk of complications of chronic conditions and increased hospitalizations. These situations often correspond to a number of factors that could be avoided with careful vigilance by staff, family members caregivers. Therefore, the health professional needs to learn an individual and collective approach (family and/or caregivers) through awareness and attitudes about the best way to welcome this particular age group.

It is noteworthy as a limitation of this study that most information was collected based on the participants' reports, which may suffer from memory bias, and the sample used is significantly small from the elderly population of the municipality. This study proposes future research to broaden the approach and find strategies for education and reception by health professionals, and for better control of medication use by the elderly people.

#### CONCLUSION

The factors related to adherence to pharmacological treatment by the elderly people in Primary Health Care found in this study were the biological aspects related to the individual conditions of the aging process and the difficulty of access to some drugs that are not provided by the public network. Thus, it is necessary that professionals and managers jointly establish strategies to facilitate access to the necessary medicines for the seniors.

It is believed that the focus of education actions should be health professionals to reduce the practice of polypharmacy and, consequently, the risk of iatrogenesis, and to pay attention to the importance of guiding and checking if the patient understood the guidelines, performed in this way providing healthy aging and quality of life.

It is also important for professionals to encourage family and caregiver involvement in the care process, as well as improving the lifestyle with healthier daily habits.

# FATORES RELACIONADOS A ADESÃO AO TRATAMENTO FARMACOLÓGICO POR IDOSOS NA ATENÇÃO PRIMÁRIA À SAÚDE

#### RESUMO

**Objetivo:** identificar os fatores relacionados à adesão ao tratamento farmacológico por idosos na Atenção Primária à Saúde. **Método:** Estudo descritivo desenvolvido junto a uma equipe da Estratégia Saúde da Família, em um município do noroeste do Paraná. Os dados foram coletados nos meses de junho e julho de 2018, por meio de questionário aplicado no momento da visita domiciliar. Posteriormente, os dados foram registrados, organizados em planilhas e submetidos à estatística descritiva. **Resultados:** Dentre os 118 idosos participantes, 61,1% eram do sexo feminino, 78,8% tinham entre 60 e 69 anos, 59,3% possuíam até oito anos de estudo, 12,2% apresentavam alguma deficiência física, 9,7% necessitavam de auxílio para utilizar medicamentos, 60,1% faziam uso da medicação conforme prescrição médica, 12,1% já fez uso de medicamento trocado, 39,8%, utilizavam de 1 a 3 medicamentos prescritos pelo médico, 50% relataram automedicação, 84,7% relataram conhecimento da indicação de todos os medicamentos, 5,1% indicaram que a maior dificuldade para aderir ao tratamento é o medicamento não ser fornecido gratuitamente. **Conclusão:** Diante dos fatores destacados pelos participantes como influentes na adesão ao tratamento medicamentoso, torna-se necessário que profissionais e gestores estabeleçam conjuntamente estratégias para facilitar o acesso aos medicamentos necessários para os idosos.

Palavras-chave: Serviços de saúde para idosos. Saúde do idoso. Adesão à medicação. Conhecimento do paciente sobre a medicação.

# FACTORES RELACIONADOS CON LA ADHESIÓN AL TRATAMIENTO FARMACOLÓGICO POR PERSONAS MAYORES EN LA ATENCIÓN PRIMARIA DE SALUD

#### RESUMEN

**Objetivo:** identificar los factores relacionados a la adhesión al tratamiento farmacológico por personas mayoresen la Atención Primaria a la Salud. **Método:** estudio descriptivo desarrollado junto a un equipo de la Estrategia Salud de la Familia, en un municipio del noroeste de Paraná-Brasil. Los datos fueron recolectados en los meses de junio y julio de 2018, por medio de cuestionario aplicado en el momento de la visita domiciliaria. Posteriormente, los datos fueron registrados, organizados en planillas y sometidos a la estadística descriptiva. **Resultados:** entre los 118 ancianos participantes, el 61,1% era del sexo femenino, 78,8% tenía entre 60 y 69 años, 59,3% poseía hasta ocho años de estudio, 12,2% presentaba alguna discapacidad física, 9,7% necesitaba de auxilio para utilizar medicamentos, 60,1% hacía uso de la medicación conforme prescripción médica, 12,1% ya se ha confundido el medicamento, 39,8%, utilizaba de 1 a 3 medicamentos prescritos por el médico, 50% relató automedicación, 84,7% relató conocimiento de la indicación de todos los medicamentos, 5,1% indicó que la mayor dificultad para adherir al tratamiento es el medicamento no ser ofrecido gratuitamente. **Conclusión:** ante los factores destacados por los participantes como influyentes en la adhesión al tratamiento medicamentoso, resulta necesario que profesionales y gestores establezcan conjuntamente estrategias para facilitar el acceso a los medicamentos necesarios para los ancianos.

Palabras clave: Servicios de salud para ancianos. Salud del anciano. Adhesión a la medicación. Conocimiento del paciente sobre la medicación.

## REFERENCES

- 1. ISMP Brasil. Medicamentos potencialmente inadequados para idosos. 2017; 7(3). Disponível em: https://www.ismp-brasil.org/site/wp-content/uploads/2017/09/is\_0006\_17a\_boletim\_agosto\_ismp\_210x276m m\_v2.pdf.
- 2. Instituto Brasileiro de Geografia e Estatística (IBGE). Síntese dos Indicadores Sociais: Síntese de indicadores sociais: uma análise das condições de vida da população brasileira: 2017. Disponível em: https://biblioteca.ibge.gov.br/visualizacao/livros/liv101459.pdf.
- World Health Organization (WHO). Noncommunicable diseases prematurely take 16 million lives annually, WHO urges more action. 2015. Available from:

https://www.who.int/mediacentre/news/releases/2015/noncommunicable-diseases/en/.

- 4. Secoli SR, Marquesini EA, Fabretti SC, Corona LP, Romano-Lieber NS. Self-medication practice trend among the Brazilian elderly between 2006 and 2010: SABE Study. Rev. bras. epidemiol. 21(Suppl 02). doi: https://doi.org/10.1590/1980-549720180007.supl.2.
- Nagai KL, Takahashi PSK, Pinto LMO, Romano-Lieber NS. Use of triggers tools to search for adverse drug reactions in the elderly admitted to emergency departments. Ciênc. saúde colet. 2018; 23(11):3997-4006. doi: https://doi.org/10.1590/1413-812320182311.27022016.
- Martins GA, Acurcio FDA, Franceschini SDCC, Priore SE, Ribeiro A. Uso de medicamentos potencialmente inadequados entre idosos do Município de Viçosa, Minas Gerais, Brasil: um inquérito de base populacional. Cad. Saúde Pública [Internet]. 2015 [cited 2019 May 26]; 31(11):2401-2412. doi: http://dx.doi.org/10.1590/0102-311X00128214.
- 7. Aiolfi CR, Alvarenga MRM, Moura CS, Renovato RD. Adesão ao uso de medicamentos entre idosos hipertensos. Rev. bras. geriatr. gerontol [online]. 2015; 18(2):397-404. doi: http://dx.doi.org/10.1590/1809-9823.2015.14035.
- 8. Borba AKOT, Marques APO, Ramos VP, Leal MCC, Arruda IKG, Ramos RSPS. Factors associated with elderly diabetic adherence to treatment in primary health care. Ciência & Saúde Coletiva. 2018; 23(3):953-961. doi: http://dx.doi.org/10.1590/1413-81232018233.03722016.
- 9. Folstein MF, Folstein SE, McHugh PR. "Mini-mental state". A practical method for grading the cognitive state of patients for the clinician. J Psychiatr Res. 1975; 12(3):189-98. doi: https://doi.org/10.1016/0022-3956(75)90026-6.

- 10. Campos ACV, Ferreira EF, Vargas AMD, Gonçalves LHT. Healthy aging profile in octogenarians in Brazil. Rev. Latino-Am. Enfermagem [Internet]. 2016 [cited 2019 May 26]; 24:e2724. doi: http://dx.doi.org/10.1590/1518-8345.0694.2724.
- 11. Bolina AF, Tavares DM. Living arrangements of the elderly and the sociodemographic and health determinants: a longitudinal study. Rev. Latino-Am. Enfermagem [Internet]. 2016 [cited 2019 May 26]; 24:e2737. doi: http://dx.doi.org/10.1590/1518-8345.0668.2737.
- 12. Miranda VIA, Fassa AG, Meucci RD, Lutz BH. Use of the Brazilian People's Pharmacy Program by older adults. Rev Saude Publica. 2016; 50:13. doi: http://dx.doi.org/10.1590/S1518-8787.2016050006180.
- 13. Paulo MA; Wajnman S, Oliveira AMCH. A relação entre renda e composição domiciliar dos idosos no Brasil: um estudo sobre o impacto do recebimento do Benefício de Prestação Continuada. R. bras. Est. Pop. 2013[acessado em 26 Maio 2019]. 30:S25-S43. Disponível em: https://www.rebep.org.br/revista/article/view/382.
- 14. Tavares DMDS, Dias FA, Ferreira PCDS, Rodrigues LR, Gonçalves JRL, Ferreira LA. Morbidities and quality of life of urban elderly people with and without heart problems. Ciência, Cuid e Saúde [Internet]. 2014 [cited 2019 May 26]; 13(4):674. doi: http://dx.doi.org/10.4025/cienccuidsaude.v13i4.19407.
- 16. Valer DB, Bierhals CCBK, Aires M, Paskulin LMG. The significance of healthy aging for older persons who participated in health education groups. Rev. bras. geriatr. gerontol. [Internet]. 2015 [cited 2019 May 26]; 18(4):809-819. doi: http://dx.doi.org/10.1590/1809-9823.2015.14042.
- 17. Stephens C, Breheny M, Mansvelt J. Healthy ageing from the perspective of older people: A capability approach to resilience. Psychol Health [Internet]. 2015 [acesso em 22 outubro de 2018]; 30(6):715-31. doi: http://dx.doi.org/10.1080/08870446.2014.904862.
- 18. World Health Organization. World report on Ageing and Health [Internet]. Geneva: WHO; 2015 [acesso em 24 de outubro 2018]. Available from:
- https://apps.who.int/iris/bitstream/handle/10665/186463/9789240694811 \_eng.pdf;jsessionid=B0192D8F45265D4FF93FD7A8CDFD08DF?sequence=1
- 19. Rios MC, Prata MS, Rios PSS, Balisa-Rocha BJ, Brito GC, Junior DPL. Percepções de idosas quanto a não adesão a farmacoterapia: uma análise qualitativa. Rev Ciênc Farm Básica Apl. 2015; 36(3):453-460. [acessado em 23 de outubro de 2018]. Disponivel em; http://seer.fcfar.unesp.br/rcfba/index.php/rcfba/article/viewFile/347/167.
- 20. Weng MC, Tsai CF, Sheu KL, Lee YT, Lee HC, Tzeng SL, et al. The impact of number of drugs prescribed on the risk of potentially

inappropriate medication among outpatient older adults with chronic diseases. QJM [Internet]. 2013 [cited 2016 Nov 24]; 106(11):1009-15. doi: https://doi.org/10.1093/qjmed/hct141.

21. Chan FW, Wong FY, So WY, Kung K, Wong CK. How much

do elders with chronic conditions know about their medications? BMC Geriatrics. 2013 [acessado em 26 maio 2019]; 13:59. doi: https://doi.org/10.1186/1471-2318-13-59.

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