

## ORIGINAL ARTICLE

## ACCESS TO AND USE OF THE HEALTH SERVICES AMONG COMMUNITY OLDER ADULTS

Darlene Mara dos Santos Tavares<sup>1</sup>   
Nayara Gomes Nunes Oliveira<sup>1</sup>   
Gianna Fiori Marchiori<sup>1</sup>   
Flavia Aparecida Dias Marmo<sup>1</sup>   
Débora Aparecida de Jesus<sup>1</sup> 

### ABSTRACT

**Objectives:** to verify access and use of the health services by community older adults and the factors associated to the use of the health services.

**Methods:** a cross-sectional study, conducted with 1,611 older adults living in the health macro-region of Minas Gerais. Data was collected from March 2017 to June 2018 by means of validated instruments. Descriptive analyses and multiple logistic regression were performed ( $p < 0.05$ ).

**Results:** 83.8% sought the same service or health professional; in the last two weeks prior to the interview (20%); had a medical consultation in the last 12 months (87.3%); used medications (87.8%); went to the dentist for the last time three years ago or more (57.7%). The use of the health services was associated with the pre-frail/frail condition ( $p = 0.026$ ) and with the negative self-perception of health ( $p = 0.037$ ).

**Conclusion:** the data denote the need for action in health to meet the demands of the frail older adult with a negative self-perception of health.

**DESCRIPTORS:** Older Adult; Health Systems; Unified Health System; Access to the Health Services; Geriatric Nursing.

### ACCESO Y USO DE LOS SERVICIOS DE SALUD ENTRE PERSONAS DE EDAD AVANZADA DE LA COMUNIDAD

#### RESUMEN:

**Objetivos:** verificar el acceso y el uso de los servicios de salud por parte de personas de edad avanzada de la comunidad y los factores asociados a dicho uso. **Métodos:** estudio transversal, realizado con 1.611 personas de edad avanzada de la macro-región de salud de Minas Gerais. Los datos se recolectaron entre marzo de 2017 y junio de 2018 por medio de instrumentos validados. Se realizaron los análisis descriptivo y de regresión logística múltiple ( $p < 0,05$ ). **Resultados:** el 83,8% procuró el mismo servicio o profesional de salud; en las dos últimas semanas anteriores a la entrevista (20%); consultaron al médico en los últimos 12 meses (87,3%); consumían medicamentos (87,8%); y fueron al dentista por última vez hace al menos tres (57,7%). El uso de los servicios de salud se asoció a la condición de pre-fragilidad/fragilidad ( $p = 0,026$ ) y a la autopercepción negativa de la salud ( $p = 0,037$ ). **Conclusión:** los datos denotan la necesidad de acciones en salud para responder a las demandas de la persona de edad avanzada en condición de fragilidad y con autopercepción negativa de su salud.

**DESCRIPTORES:** Persona de edad avanzada; Sistemas de Salud; Sistema Único de Salud; Acceso a los Servicios de Salud; Enfermería Geriátrica.

## INTRODUCTION

The epidemiological changes in Brazil have increased the prevalence of chronic diseases and their complications, which leads to greater use of the health services<sup>(1)</sup>.

The challenges of accessing the health service tend to be greater for older adults<sup>(1)</sup>, due to the complexity of the demands of this age group. Therefore, the services must be able to meet their needs in terms of prevention and/or control of diseases and promotion of active and healthy aging, favoring autonomy and well-being<sup>(2)</sup>. In this context, the relevance of identifying factors that contribute to the access to and use of the health services by older adults is highlighted.

A research study conducted at the national level found that 83.5% of the older adults sought the health service; however, a lower percentage of appointments with dentists (28.9%) was also observed<sup>(3)</sup>. The demand for the health services is higher for individuals with chronic diseases, hospitalized or with a health problem that makes it impossible for them to perform their usual activities<sup>(3)</sup>.

In the older adult population, the main difficulties in accessing to and using the health services are related to socioeconomic aspects and mobility difficulties<sup>(1)</sup>. In diverse research studies, it was verified that the use of the health services by older adults was associated with: being female<sup>(2)</sup>; older age group<sup>(3)</sup>; negative self-perception of health<sup>(4-6)</sup>; presence of depressive symptoms<sup>(4-5)</sup>; absence of a partner, and frail condition<sup>(6)</sup>.

The relationship of the older adults with the health services can reflect inequalities that negatively impact on their quality of life (QoL), depending on integrated and effective public policies<sup>(6)</sup>. Thus, knowledge of the use of the health services by this population can contribute to the organizational planning of the health care network, as well as favor the prevention of preventable hospitalizations and the reduction of health inequalities<sup>(7)</sup>.

This study aimed to verify the access to and use of the health services by community older adults and the factors associated to the use of the health services.

## METHOD

A cross-sectional and analytical study with a quantitative approach, developed in the urban area of the health macro-region of Minas Gerais, made up by three health micro-regions, which include a total of 27 municipalities.

The population, selected by means of multi-stage cluster sampling, was made up of older adults living in the urban area of the referred macro-region. The sample size calculation considered a prevalence of use of the health services in the last two weeks prior to the interview of 25.0%<sup>(3)</sup>, with 1.5% accuracy and 95% confidence interval for a finite population of 75,726 people aged 60 years old or older, reaching a sample of 1,659 older adults.

The inclusion criteria considered are as follows: being 60 years of age or older and living in the urban area of the health macro-region. As for exclusion, older adults with cognitive decline<sup>(7)</sup>; severe stroke sequelae with localized loss of strength and aphasia; Parkinson's disease in severe or unstable stage with severe impairment of motor skills, speech or affectivity. A total of 1,659 older adults were interviewed, of which 48 presented cognitive decline. Thus, the sample consisted in 1,611 older adults.

Data collection was carried out in the older adults' homes, from March 2017 to June 2018. The interviews were conducted by 10 interviewers who underwent training, qualification and approach on ethical research issues.

Cognitive decline was assessed by the Mini-Mental State Examination (MMSE)<sup>(7)</sup>, considering the following cutoff points:  $\leq 13$  for illiterate people,  $\leq 18$  for low (1 to 4 incomplete years) and mid-level schooling (4 to 8 incomplete years), and  $\leq 26$  for high level of schooling ( $\geq 8$  complete years)<sup>(8)</sup>. The sociodemographic data, morbidities and self-perception of health were obtained by means of a questionnaire elaborated by the Group of Research in Collective Health.

Access to and use of the health services were assessed by two sections of the questionnaire of the National Household Sample Survey (*Pesquisa Nacional por Amostra de Domicílios, PNAD*)<sup>(9)</sup>.

The frailty syndrome was measured as described in a previous study<sup>(10)</sup> and identified through five components of the frailty phenotype<sup>(11)</sup>: unintentional weight loss, decreased muscle strength, slow gait speed, low level of physical activity, and self-report of exhaustion and/or fatigue. Older adults with impairment in three or more items were classified as frail; in one or two, as pre-frail; and without impairment, as not frail<sup>(11)</sup>.

The sociodemographic variables were the following: gender (female and male), age group in complete years (60-70; 70-80; 80 or older), schooling in years (none; 0-5; >5), marital status (with a partner; without a partner) and individual monthly income, in minimum wages (without income; <1; 1; 1-3; 3-5; >5); health variables: frailty syndrome (not frail; pre-frail; frail), self-perception of health (negative and positive) and number of morbidities (0-5;  $\geq 5$ ); healthcare access variables: seeking the same place of health care (yes and no), medical consultation in the last 12 months (yes and no), use of continuous medications (yes and no), dentist appointment in the last year (yes and no); and variables for the use of the health services: care related to their own health in the last two weeks (yes and no).

An electronic database was built using the Excel® software and data was entered through double typing. Inconsistencies were verified between the two databases, with the due corrections made, when necessary. After this procedure, the database was imported for analysis into the Statistical Package for Social Sciences (SPSS®) program, version 22.0.

Descriptive analysis was performed and the predictive variables were dichotomized (gender, age group: 60-80; 80 years old or more; schooling: yes or no; marital status; monthly individual income:  $\leq 1$ ;  $> 1$ ; frailty syndrome: not frail; pre-frail/frail; self-perception of health; and number of morbidities). They were then submitted to preliminary bivariate analysis, by employing the Chi-square test. Those who met the established criterion ( $p \leq 0.10$ ) were introduced in the multiple logistic regression model, having the use of the health services ( $p < 0.05$ ) as outcome.

The project was approved by the Ethics Committee for Research with Human beings, protocol No. 493,211. The interview was conducted, after the consent of the older adults and the signing of the Free and Informed Consent Form.

## RESULTS

Among the older adults, 1,067 (66.2%) were female; 676 (42%) were 60-70 years old; 905 (56.2%) did not have a partner; 814 (50.5%) had a monthly income of 1 minimum wage; 855 (53%) had 1-5 years of study; 1,029 (63.9%) had 5 or more morbidities; 813 (50.4%) were pre-frail; and 906 (56.2%) had a negative self-perception of health, as shown in Table 1.

Table 1 - Distribution of the frequency of the sociodemographic and health characteristics of the older adults living in the health macro-region. Uberaba, MG, Brazil, 2020

Variables	n	%
Gender		
Female	1,067	66.2
Male	544	33.8
Age group		
60   70	676	42
70   80	621	38.5
80 or more	314	19.5
Marital status		
No partner	905	56.2
With a partner	706	43.8
Monthly individual income <sup>†</sup>		
No income	90	5.6
< 1	55	3.4
1	814	50.5
1   3	563	34.9
3   5	71	4.5
> 5	18	1.1
Schooling		
None	315	19.6
1   5 years	855	53
≥ 5 years old	441	27.4
Number of morbidities		
0   5	582	36.1
≥ 5	1,029	63.9
Frailty syndrome		
Frail	396	24.6
Pre-frail	813	50.4
Not frail	402	25
Self-perception of health		
Negative	906	56.2
Positive	705	43.8

Source: The authors (2020).

It was verified that 1,350 (83.8%) older adults accessed the same service and professional when they needed health care; 1,406 (87.3%) had a medical consultation in the last 12 months; 929 (57.7%) went to the dentist for the last time three years ago or

more; and 1,415 (87.8%) used continuous medications, of which 693 (49%) received part of them and 962 (83.8%) purchased those that were missing (Table 2). In addition, 323 (20%) older adults used the health services in the last two weeks prior to the interview.

Table 2 – Distribution of frequency of access to the health services among older adults living in the health macro-region. Uberaba, MG, Brazil, 2020

<b>Variables</b>	<b>n</b>	<b>%</b>
Access to the same health service and professional		
Yes	1,35	83.8
No	261	16.2
Medical consultation in the last 12 months		
Yes	1406	87.3
No	205	12.7
Use of continuous medications		
Yes	1415	87.8
No	196	12.2
Access to the use of continuous medications		
All the medications	266	18.8
Part of the medications	693	49
None of the medications	455	32.2
Medications of continuous use, not received for free		
Bought all	962	83.8
Bought part of the medications	173	15.1
Did not buy any of the medications	13	1.1
Visit to the dentist		
Less than a year	358	22.2
From one to two years	299	18.6
Three years or more	929	57.7
Never been to the dentist	25	1.5

Source: The authors (2020).

The number of morbidities ( $p=0.003$ ), frailty syndrome ( $p=0.003$ ) and self-perception of health ( $p=0.001$ ) variables met the criterion adopted ( $p\leq 0.10$ ) and were inserted in the multivariate model (Table 3).

Table 3 – Bivariate analysis with sociodemographic and health variables according to the use of the health services by older adults living in the health macro-region. Uberaba, MG, Brazil, 2020

Variables	Use of the health services in the last two weeks		p <sup>†</sup>
	Yes n (%)	No n (%)	
Gender			
Male	106 (19.5)	438 (80.5)	0.686
Female	217 (20.3)	850 (79.7)	
Age group			
60   80	265 (20.4)	1032 (79.6)	0.436
80 and over	58 (18.5)	256 (81.5)	
Schooling			
No schooling	63 (20)	252 (80)	0.980
With schooling	260 (20.1)	1036 (79.9)	
Marital status			
No partner	176 (19.4)	729 (80.6)	0.494
With a partner	147 (20.8)	559 (79.2)	
Monthly individual income <sup>‡</sup>			
> 1	118 (18.1)	534 (81.9)	0.110
≤ 1	205 (21.4)	754 (78.6)	
Number of morbidities			
0   5	94 (16.2)	488 (83.8)	0.003
≥ 5	229 (22.3)	800 (77.7)	
Frailty syndrome			
Not frail	60 (14.9)	342 (85.1)	0.003
Pre-frail/Frail	263 (21.8)	946 (78.2)	
Self-perception of health			
Positive	115 (16.3)	590 (83.7)	0.001
Negative	208 (23)	698 (77)	

Note: †p≤0.10; Chi-square test (x<sup>2</sup>).

Source: The authors (2020).

The use of the health services by the older adults in the previous two weeks was associated with the pre-frail/frail condition (p=0.026) and with the negative self-perception of health (Table 4).

Table 4 – Final multiple logistic regression model for the variables associated with the use of the health services by older adults living in the health macro-region. Uberaba, MG, Brazil, 2020

Variables	Use of the health services in the last two weeks		
	OR <sup>†</sup>	95% CI <sup>‡</sup>	p <sup>§</sup>
Number of morbidities			
0-5	1		
≥ 5	1.28	0.97-1.70	0.080
Frailty syndrome			
Not frail	1		
Pre-frail/Frail	1.42	1.04-1.95	0.026
Self-perception of health			
Positive	1		
Negative	1.33	1.02-1.75	0.037

Notes: <sup>†</sup>OR=Odds Ratio; <sup>‡</sup>95% CI=Confidence Interval; 1: Reference category; <sup>§</sup>p<0.05.

Source: The authors (2020).

## DISCUSSION

The higher percentage of older adult women is consistent with research studies conducted in the community<sup>(12-13)</sup>, as well as the predominance of older adults aged 60-70 years old<sup>(13)</sup>. These data corroborate the increase in population aging in all age groups and the phenomenon of feminization of old age, due to the higher life expectancy of women and the demand for services and health care<sup>(3,14)</sup>.

A divergent result was identified in a national study with community older adults<sup>(15)</sup>, in which the majority had a partner. It is noteworthy that, whenever possible, family involvement should be encouraged as a support network in health care, since it can contribute to the search for the health service and continuity of treatment, whether in home support or in the follow-up with the health professionals.

A study also verified low income among the older adults<sup>(13)</sup>, a factor that influences access to the health services, as it can result in the need to maintain a paid activity and, consequently, in incompatibility in the opening hours of the health units and work conciliation<sup>(16)</sup>. These findings express the daily challenge experienced by older adults to maintain basic needs and health care<sup>(17)</sup>. Therefore, it is essential that the multidisciplinary team, especially nurses, take into account not only the disease of the older adult, but the entire context when establishing health care. Thus, it is assumed that there will be a greater possibility of an effective response to the treatment.

Consistent with this research, it was verified that most older adults had between one and four years of study<sup>(12-13,15)</sup>. The population aged 60 or older has a mean of 4.1 years of study and the illiteracy data are significant: 25.7% of the older adults<sup>(14)</sup>. Education can influence the access to and use of the health services, since different educational levels are associated with differences in health habits<sup>(14,18)</sup>. Thus, knowing the educational profile of the older adults provides information for public policies in order to promote the democratization of access to quality learning opportunities<sup>(14)</sup>, and especially in access to and use of the health services.

Most older adults accessed the same service or health professional for their care (79.3%)(3), similarly to this research. Follow-up by the same health professionals favors the reduction of the occurrence of complications resulting from the presence of chronic diseases and the regular use of medications<sup>(19)</sup>, in addition to suggesting the bond between the older adults and the health professional and their satisfaction with care.

The findings concerning the medical consultation in the last 12 months vary widely by country, with a similar percentage in a national survey (85.3%)(3) and lower in the community of São Paulo-SP (57.6%)(20). These differences are probably related, among other factors, to the organization and offer of health services in different locations, as the aging process changes the demands for health services, with greater demand by older adults<sup>(2,20)</sup>. Medical consultation can contribute to health promotion and disease prevention<sup>(19)</sup>, but it is also possible that the excessive use of services is a marker of care with low resoluteness<sup>(12)</sup>. When considering the predominance of chronic diseases among older adults, the context presented can also be related to the expedition of care during the consultation, the impossibility of choosing the care provider, and/or prioritization of care for acute conditions, in a fragmented manner<sup>(13)</sup>, generating a recurring demand.

The high percentage of older adults who use continuous medication is consistent with a national research study conducted in the community<sup>(20)</sup>. The greater use of medications by older adults can be due to the increased prevalence of chronic diseases, which leads to the need for continuity and increased drug therapy<sup>(21)</sup>. However, changes during the aging process can cause the use of certain drugs to generate adverse reactions and some to be inappropriate for older adults<sup>(21)</sup>. For this reason, nurses must work aiming at the QoL and well-being of this population<sup>(22)</sup>, investigating complaints related to medications, using clear communication and, consequently, avoiding possible negative health outcomes<sup>(21)</sup>.

The frequency of access to the use of continuous medications was lower than in the studies among older adults carried out by the PNAD (2008) (86.0%)(23) and by the National Health Survey (82.6%)(3). A national study verified that the older adults who did not have free access to all drugs of regular use presented a higher number of morbidities and worse self-perception of health<sup>(23)</sup>. Thus, access to medications can be considered as an indicator of the quality and resoluteness of the health system<sup>(23)</sup>.

The supply and distribution of medications in Primary Health Care are essential in the health care of older adults since, in most cases, the availability of medicines in this network is the only resource available for treatment<sup>(21)</sup>. As identified in this study, older adults use multiple medications and have low incomes, causing greater vulnerability for health maintenance. This can negatively impact on the ability for self-care and on the behavior to reduce risks<sup>(21)</sup>.

Another issue that requires attention is the low demand of older adults for dental services, a data similar to Brazilian research studies<sup>(3,24-25)</sup>. This fact, especially among edentulous older adults or those who use complete dentures, can suggest lack of perception of the need for oral care<sup>(24)</sup>.

A lower percentage of older adults used the health services in the last two weeks prior to the interview in relation to a nationwide survey (25.0%)(3). Their use is associated with the provision of services, availability of human and financial resources, and socioeconomic and cultural conditions of the older adults<sup>(26)</sup>. Schooling also plays an essential role, with a higher percentage being verified among older adults with higher education<sup>(3)</sup>. Thus, the social and economic structure differs between the social groups and can represent changes in the use of the health services<sup>(3,26)</sup>.

In an international survey, it was verified that frail older adults used the health services three times more when compared to those who are not frail<sup>(27)</sup>, a fact consistent with this study. Divergent data were obtained in a research study with community older adults ( $p=0.554$ )(28). However, there is evidence of an association between frailty, functional dependence and mental disorders<sup>(4)</sup>, which can result in increased use of the health services.

The frailty syndrome is a predictor of adverse outcomes, such as functional limitation, falls, comorbidities, greater use of medications, institutionalization and hospitalizations<sup>(11)</sup>. Such adverse outcomes can increase the demand for the use of the health services among the older adults<sup>(27)</sup>. Thus, frailty must be a priority in the assistance provided in the health services, as it is prevalent among older adults and has a negative impact on their QoL and on that of the family members<sup>(28)</sup>. In this perspective, the assessment of frailty must be instituted in primary care services, aiming at early identification and the necessary intervention.

The association between the use of the health services and negative self-perception of health is in line with a research study conducted among community older adults in a municipality within the region of Triângulo Mineiro-MG<sup>(4)</sup>; and with a systematic review study, in which it was verified that negative self-perception of health was associated with a greater number of hospitalizations and medical consultations<sup>(5)</sup>. In addition, a national research study identified that the better the older adult's self-perception of health, the demand for the health services to treat illness reduces approximately 11% to 12%(29).

Self-perceived health status is a determinant of the use of services<sup>(30)</sup> and is considered an indicator of the general health conditions of the populations<sup>(5)</sup>, especially among older adults<sup>(5,30)</sup>. In a review study, it was shown that negative self-perception of health is associated with the use of medications and comorbidities<sup>(5)</sup>. These factors were identified in this research and help to understand the greater use of the health services to monitor chronic conditions and prescribe medications. These findings help in the planning of Nursing actions in primary care, seeking to improve health care for older adults.

The limitations of this study include its cross-sectional design, which prevents the causal relationship between the events studied, and the exclusion of older adults with cognitive impairment, which may have favored a healthier sample, but contributes to a better quality of self-reported answers.

It is suggested to carry out multi-centric studies, with representative samples of older adults in different Brazilian states, in order to contribute to the improvement of health care for the older adult.

## CONCLUSION

Older adults seek the same health service for care, with medical consultation being the most sought in the last 12 months. They use continuous medications, not always offered by the public service, and have been to the dentist more than three years ago. The use of the health services was associated with the condition of pre-frailty/frailty and with a negative self-perception of health.

These results show the relevance of directing strategies that aim at postponing the emergence of frailty, as well as establishing health actions to meet the demands of frail older adults with negative self-perception of health.

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#### Corresponding author:

Darlene Mara dos Santos Tavares

Universidade Federal do Triângulo Mineiro - Uberaba, MG, Brasil

E-mail: [darlene.tavares@uftm.edu.br](mailto:darlene.tavares@uftm.edu.br)

#### Role of Authors:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - DMST, NGNO, GFM, FADM, DAJ

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