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# HEALTH OF THE ELDERLY WOMAN: A PHYSIOTHERAPY APPROACH

## *SAÚDE DA MULHER IDOSA: UMA ABORDAGEM DA FISIOTERAPIA*

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**ABSTRACT**

Objective: To evaluate the sociodemographic profile, functional capacity and cognitive level of elderly women. Method: Quantitative study, carried out with 15 women aged 60 years or over. Results: The sociodemographic results demonstrated that elderly women had a mean age of 70.73 ± 8.4 years, nine of whom (70%) were retired, six (40%) were married and five (35.7%) were illiterate. Among the comorbidities that most affect this population are hypertension (56%), heart failure (20%) and type II diabetes mellitus (16%). It was identified that twelve (80%) do not practice physical activities. In the data referring to the Mini Mental State Examination, six elderly women (42.9%) were identified with scores between 16 and 20 points, suggesting moderate cognitive loss. In the Timed Up and Go test, it was identified that five elderly women (33.3%) had impaired gait as they indicated a time greater than or equal to 30 seconds. Regarding the Tinetti test, (66.7%) were identified with scores between 19 and 24 points, categorizing a moderate risk of falls. Final considerations: It is concluded that elderly women in this age group present a reduction in functional and cognitive capacity, especially after the application of the tests, which is in line with other studies on this topic. However, the importance of the role of the physiotherapist in the Family Health Strategy was noted.

**Keywords:** Geriatric assessment, Physical therapists, Elderly, Health promotion.

***RESUMO***

*Objetivo: Avaliar o perfil sociodemográfico, capacidade funcional e nível cognitivo de mulheres idosas. Método: Estudo quantitativo, realizado com 15 mulheres com idade igual ou superior a 60 anos. Resultados: Os resultados sociodemográficos demonstraram que as mulheres idosas apresentaram média de idade de 70,73 ± 8,4 anos sendo que nove (70%) são aposentadas, seis (40%) são casadas e cinco (35,7%) analfabetas. Entre as comorbidades que mais acometem esta população está a hipertensão (56%), insuficiência cardíaca (20%) e diabetes mellitus tipo II (16%). Foram identificadas que doze (80 %) não praticam atividades físicas. Nos dados referentes ao Mini Exame do Estado Mental, foram identificadas seis idosas (42,9 %) com pontuações entre 16 e 20 pontos, sugerindo perda cognitiva moderada. No teste Timed Up and Go foi identificado que cinco idosas (33,3%) apresentaram marcha prejudicada pois indicaram tempo maior ou igual a 30 segundos. Quanto ao teste Tinetti, foram identificadas (66,7%) com pontuação entre 19 e 24 pontos, categorizando um moderado risco de quedas. Considerações finais: Conclui-se que as mulheres idosas nessa faixa etária apresentam uma redução na capacidade funcional e cognitiva, principalmente após a aplicação dos testes, o que vai de encontro com outros estudos sobre essa temática. No entanto, constatou-se a importância do papel do fisioterapeuta na Estratégia de Saúde da Família.*

***Palavras-chave:*** *Avaliação geriátrica, Fisioterapeutas, Pessoa Idosa, Promoção da saúde.*

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## INTRODUCTION

The ageing transition can be described as a combination of morphological, physiological and biochemical changes and psychological conditions that show the individual's loss of ability to be adapted to the environment, considered to be a dynamic and gradual process. It is known that longer survival is possible, with a greater quality of life, by pursuing ageing with more autonomy and independence, with good physical and mental health, in short, successful ageing. Nevertheless, we are aware that we need to be cautious not to oversaturate ourselves (FERREIRA et al 2017).

In accordance with the Brazilian Institute of Geography and Statistics (IBGE), in 2022 the female population would exceed the male population by roughly 4 million in Brazil. This quantitative difference between men and women is mainly due to the higher death rates for young men. The reason for this is that, in most cases, they have healthier habits than men, as well as having more frequent medical check-ups, which helps to detect and treat possible diseases (GOMES *et al.*, 2018).

Throughout the ageing process, biological, social and mental health-related changes can cause vulnerable conditions in the elderly, which will cause limitations in their functional abilities (VIEIRA *et al.*, 2019).

For this purpose, one of the aspects that requires special consideration for the autonomy of the elderly is functional capacity, which is an important indicator of the degree of independence (VERAS, 2019). It is essential to know the underlying factors that impact the functional ability of the elderly, so that prevention actions and interventions can be planned in Primary Health Care (PHC), responsible for organizing care for both the individual and the community (MENDES, 2015).

Several studies have shown that functional capacity can be influenced by demographic and socioeconomic factors, as well as by health conditions and psycho-emotional aspects (NOGUEIRA *et al.*, 2017; POSSATTO; RABELO, 2017). Within the changes that take place in the aging process are those that cause more instability, such as a decrease in strength and muscle mass, changes in posture and balance, which affect gaits.

In Schneider's (2010) opinion, these predispose the elderly to the risk of falling, as do the environmental risks such as the physical space in which they live, such as inappropriate illumination, slippery floors, unsupportive stairs, high shelves and cupboards.

In essence, the maintenance of functional capacity is an important activity that needs to be carried out interprofessionally by physiotherapists, doctors, nurses, psychologists, social workers and occupational therapists (MONTENEGRO; DA SILVA, 2007). The availability of these professionals in the health network should be seen as a priority (WHO, 2022).

In this context, we can see the importance of physiotherapists, as they have skills and abilities that allow them to work at all levels of care, especially in primary care (PC) (RIBEIRO; SOARES, 2015). The physiotherapist is responsible for health promotion and disease prevention, through

activities undertaken in collaboration with other professionals in the unit, providing the patient with knowledge about their clinical condition, as well as self-care in order to promote health and preventing future diseases (ANTUNES *et al.*, 2020). The multidisciplinary team includes the need for physiotherapists to help improve the quality of life and health promotion of its users, i.e. by participating in the Family Health Support Centers (NASF), acting together with the Family Health Strategy (ESF) based on the principles of integrality, intersectorality and actions aimed at promoting health and quality of life for users (FU, 2018).

The aim of this study was to assess the sociodemographic profile, functional capacity and the cognitive level of elderly women, as well as to report on the relevance of the inclusion of physiotherapists in the ESF for this population.

## METHODS

### Participants

Fifteen elderly women aged 60 or over were selected at random for the study. The reason that only women were included in the sample was due to the fact that this is the group that most commonly adheres to the public health system and which welcomes health workers with the most enthusiasm. Women with severe visual deficits, lower limb fractures in the last three months and bedridden elderly women were excluded from the study.

### Method of follow-up

During the period January to April 2023, the data was collected by the principal researcher, a Physiotherapy graduate student, and volunteer researchers who had been previously instructed in the use of the collection instrument. The first stage of data collection was to find the addresses of the elderly women in the ESF with the help of the Community Health Agents (ACS). Once the addresses had been found, the visits began, where they were given information about the research, signed an informed consent form (ICF) and explained how the research would be handled. A questionnaire was administered comprising questions on the participants' age, schooling, comorbidities and physical exercise. The instruments used to assess cognition, balance and the risk of falls were also applied. The Mini Mental State Examination (MMSE), created in 1975 by Folstein M, is a neuropsychological test used to assess cognitive function, which covers domains such as temporal and spatial orientation, memory, calculation, language, repetition, understanding, handwriting and copying drawings. A patient who scores more than 25 points is considered normal, while mild cognitive impairment is suspected when the score is between 21 and 24 points, moderate when it is between 10 and 20 points and severe when it is less than or equal to 9 points.

The Tinetti instrument (POMA) created in 1986 by Tinetti William evaluates balance and gait abnormalities. It contains 16 items, 9 of which are for body balance and 7 for gait. The aspects of gait are classified as speed, step distance, symmetry and standing balance, turning and also changes with the eyes closed. The score for each exercise varies from 0 to 1 or 2, with a lower score denoting poorer physical ability. The highest score is 12 points for gait, 16 for body balance and 28 for total to assess aspects of walking and standing balance.

The Timed Up and Go test, known as TUG, created in 1991 by Podsiadlo, detects the risk of falls and consists of getting up from a chair, walking to a straight line 3 meters away (at a self-selected but safe pace), turning around, walking back and sitting down again. The shorter the time taken, the better the performance in the test. The evaluations took place at the individuals' homes, taking around 30 minutes to complete all the tests.

## RESULTS

The results in Table 1 show a predominance of people aged between 60 and 69. In terms of marital status, the majority were married. In terms of schooling, there was a predominance of illiteracy and when analyzing the source of income, retirement was the most common.

**Table 1 -** Sociodemographic results.

| Age | % | Marital Status | % | Schooling | % | Source of Income | % |
|---|---|---|---|---|---|---|---|
| 60 to 69 years old | 46,7% | Married | 40% | Illiterate | 35,7% | Retired | 70% |
| 70 to 79 years old | 40% | Single | 33,3% | 4º to 8º grade | 28,6% | Pensioner | 30% |
| ≥ 80 years old | 13,3% | Widow | 13,3% | 3º grade | 21,4% | - | - |
| | - | Divorced | 13,3% | Completed High School | 14,3% | - | - |

Source: Authors' construction (2023).

**Table 2 -** Shows that more than half of the women are hypertensive. In terms of physical exercise, it was found that most of them did not practice physical exercise.

| Comorbidities | % | Practicing Physical Exercise | % |
|---|---|---|---|
| Hypertension + Diabetes Mellitus | 52,9% | Non-Exercisers | 80% |
| Hypertension + Heart failure | 23,5% | Exercisers | 20% |
| No diseases | 6,9% | | |

Source: Authors' construction (2023).

Table 3 shows the results of the tests carried out on the elderly women, which revealed moderate cognitive impairment, impaired gait and a predominantly high risk of falling.

**Table 3 -** Results of the Mini Mental State Examination, Timed Up and Go and Tinetti Test.

| Mini Mental State Examination | % | Timed Up and Go (TUG) | % | Tinetti Test (POMA) | % |
|---|---|---|---|---|---|
| 10 and 20 points | 42,9% | ≥ 30 s | 33,3% | 19 and 24 points | 66,7% |
| 21 and 24 points | 28,6% | 11 and 20 s | 26,7% | > 25 points | 20% |
| 26 and 30 points | 28,6% | 21 and 30 s | 26,7% | < 19 points | 13,33% |

Source: Authors' construction (2023).

## DISCUSSION

Analysis of the data from this study shows that the age group of elderly women is 60-70 years old, married and illiterate. It is noteworthy that there is a general predominance of more elderly women than men in Brazil, once again showing the issue of the feminization of aging (LEITE *et al.*, 2017). Nonetheless, women have a poorer quality of life than men, mainly due to the impact of interpersonal relationships that shape the entire life cycle and affect access to resources and opportunities, with a sustained and cumulative impact on social life (WARMLING, 2021).

The illiteracy shown in our study highlights, according to Barros et al, 2021 a social disadvantage for elderly women, as it affects access to health services, opportunities for social participation, understanding of treatment and self-care. As for comorbidities, there was a prevalence of systemic arterial hypertension (SAH), diabetes mellitus (DM) and congestive heart failure (CHF). Also according to data from the Ministry of Health (Brazil, 2016), 40% of the adult Brazilian population, i.e. the country's future elderly, have already suffered from some form of Chronic Non-Communicable Disease (CNCD), with women being the most affected (44%). Among the CNCDs, SAH, DM and CHF are the most common diseases among the elderly in Brazil and the main causes of hospitalization in the public health system (SUS) (BRASIL, 2016).

It is worth noting in our study that the majority of elderly women do not practice any type of physical exercise. In this sense, Lopes (2016) points out that the barriers that prevent people from practicing physical activities are often a lack of interest in new activities. Therefore, one way of motivating the elderly to practice physical exercise would be to have weekly groups of elderly people together with the ESF in a welcoming environment; other factors for not practicing physical activity are physical pain. Figliolino (2017) pointed out in his study that elderly women who did not practice physical activity had a balance deficit, as well as lower functional mobility and greater changes in balance and gait.

Physical activity is presented as a basic strategy for preventing falls in older people. However, healthcare professionals should pay more attention to the susceptibility factors of older people and develop prevention strategies to improve functional capacities and quality of life, motivating older

people (Tomicki *et al*., 2016). In the same way, physical activity is essential for people who have been diagnosed with DM and/or hypertension and/or CHF, as it is effective in managing blood glucose levels, reducing blood pressure levels, cholesterol and body weight. This practice improves muscle strength, balance, circulation and motor coordination (CUNHA, 2020).

In a recent study, Silva (2022) identified that the multidisciplinary and individualized work of the physiotherapist contributes to the comprehensive care of patients, always seeking physical and functional well-being. Studies on this subject show that functional capacity can be influenced by demographic factors, as well as socioeconomic factors, in addition to health conditions and psycho-emotional aspects (NOGUEIRA *et al*., 2017; POSSATTO; RABELO, 2017). Thus, the physiotherapist should offer basic health guidelines, as well as physical activities, stretching, mobility, strengthening, gait and balance training, focused on maintaining or improving the functional capacities of elderly patients.

Accordingly, when the elderly women underwent the Timed Up and Go and Tinetti tests, a moderate risk of falling was identified, suggesting a deficit in functional capacity. These results are worrying, since the variables it analyzes (balance, gait speed and functional capacity) suggest a risk of falls, which are linked to the causes of mortality in the elderly, mainly due to the organic complications caused (Lana; Kuhn, 2017). Elderly women are often affected by chronic illnesses, which generate pain and/or difficulty in daily activities, such as getting up from a chair and walking short distances. The presence of pain and discomfort is considered to be closely associated with a decrease in muscle strength and functionality (SKOU *et al*., 2016)

Concerning the elderly women's cognitive level, the Mini-Mental State Examination showed a moderate cognitive impairment, suggesting that there are moderate deficits in memory, language, attention, reasoning, judgment, organization and planning, but which, if not addressed, can lead to cognitive decline (Martins *et al*., 2019).

A limitation of this study is the small sample size and the difficulty in finding household addresses. To resolve these limitations, a longer collection period would be necessary, as well as better tracking of households together with the ESF team.

## FINAL CONSIDERATIONS

This study led us to conclude that elderly women in this age group have a reduction in functional and cognitive capacity, especially after the tests were applied, which is in line with other studies on this subject. The need to include this professional in the ESF is emphasized, pointing to preventive actions and physiotherapeutic assistance. Here, we propose the need for further research on this subject.

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