

## Does the Level of Functional Health Literacy among the Elderly Impact Their Ability to Comprehend and Adhere to Self-Care Instructions?

### Krycia Renata da Rocha Conceição

Postgraduate Program in Teaching in Science and Health, Universidade Federal do Tocantins, Palmas, Tocantins, Brasil.

### Antonio Matheus Santos Medrado

Postgraduate Program in Teaching in Science and Health, Universidade Federal do Tocantins, Palmas, Tocantins, Brasil.

### Isadora Araújo

Postgraduate Program in Teaching in Science and Health, Universidade Federal do Tocantins, Palmas, Tocantins, Brasil.

### Paulo Henrique Torres de Araújo

Postgraduate Program in Teaching in Science and Health, Universidade Federal do Tocantins, Palmas, Tocantins, Brasil.

### Luíza Aires Brom Carbonari Ranzi

Universidade Federal do Tocantins, Palmas, Tocantins, Brasil

### Luiz Sinesio Silva-Neto

Postgraduate Program in Teaching in Science and Health, Universidade Federal do Tocantins, Palmas, Tocantins, Brasil.

### Fernando Rodrigues Peixoto

### Quaresma

Postgraduate Program in Teaching in Science and Health, Universidade Federal do Tocantins, Palmas, Tocantins, Brasil.

### André Pontes-Silva

Postgraduate Program in Physical Therapy, Department of Physical Therapy, Universidade Federal de São Carlos, São Carlos, São Paulo, Brasil.

(Corresponding author):

contato.andrepsilva@gmail.com

### Erika da Silva Maciel

Postgraduate Program in Teaching in Science and Health, Universidade Federal do Tocantins, Palmas, Tocantins, Brasil.

Received: 01 October 2024

Accepted: 15 January 2025

Doi: 10.22038/jhl.2025.82996.1641

### ABSTRACT

**Background and Objectives:** Aging is a natural process that involves morphological, psychological, functional, and social changes. The gradual decrease in functional capacity during aging can lead to functional dependence and chronic diseases. Functional health literacy is a health education technique that promotes the individual's ability to access, read, understand, interpret, evaluate, and apply health-related information. Functional health literacy enables elderly individuals to be more active and informed about their own health, promoting self-care. To summarise research on the level of functional health literacy among the elderly and their ability to comprehend and follow self-care instructions.

**Materials and Methods:** A narrative review. The databases used to conduct the scoping review were PubMed and Scopus, using the combination of the Boolean operator "AND" and descriptors: Functional health literacy; Self-care in older adults; Functional health literacy in older adults.

**Results:** Research indicates that adequate adherence to disease treatment is fundamental to the effectiveness of healthcare. When older adults struggle to comprehend self-care instructions, they may face challenges in correctly adhering to medication regimens, attending follow-up appointments, or adopting healthy lifestyle practices. A low level of functional health literacy can hinder the comprehension and utilization of health-related information, such as scheduling appointments, interpreting medical exams and forms, and preventing diseases.

**Conclusion:** The ability of older adults to comprehend and follow self-care instructions is directly impacted by their functional health literacy level, which in turn affects their overall quality of life.

**Paper Type:** Research Article

**Keywords:** Quality of Life; Health Literacy; Education.

► **Citation:** Renata da Rocha Conceição K, Matheus Santos Medrado A, Araújo I, Henrique Torres de Araújo P, Aires Brom Carbonari Ranzi L, Sinesio Silva-Neto L, Rodrigues Peixoto Quaresma F, Pontes-Silva A, da Silva Maciel E. Does the Level of Functional Health Literacy among the Elderly Impact Their Ability to Comprehend and Adhere to Self-Care Instructions? *Journal of Health Literacy*. Spring 2025; 10(2): 68-74.

## Introduction

Aging is a natural process that all people go through throughout their lives. The growing number of older people has led to an inversion of the age pyramid, with recent estimates suggesting that the number of older people will rise from 19.6 million in 2010 to 66.6 million in 2050 (1). As we age, our bodies undergo changes that affect our health, appearance, activities of daily living, instrumental activities of daily living and social practices. As a result of these morphological, psychological, social and functional changes, the aging process gradually reduces functional capacity, leading to functional dependency and some chronic diseases (2).

Longevity is seen as an important scientific achievement, but this achievement will be enhanced if the aging process is of a quality in which the older person is able to manage his or her own life and health autonomously. Understanding the aging process is essential to use/create approaches in health education and contribute positively and healthily to active aging (3). One health education technique used in health promotion is functional health literacy, which refers to an individual's ability to access, read, understand/interpret, evaluate and apply health-related information effectively. Using this technique, the person becomes the protagonist of health information in all contexts of social interaction and develops/improves self-care practices (4).

Self-care practices is a set of actions that each person must take to care for themselves and improve their quality of life (5). To promote self-care, it is necessary to have functional health literacy skills in the physical,

emotional, and aesthetic dimensions. The manner of self-care must be consistent with each person's desires, interests, pleasures, and goals (6).

Functional health literacy plays a fundamental role in the aging process, supporting decision making, autonomy in health management, disease prevention, effective communication with health professionals, reducing health inequalities, in other words, functional health literacy helps and empowers older people to be more active and informed in their own lives. Promoting health self-care in this way (4). Developing health practices that include self-care is extremely important for longevity. Because self-care means taking care of yourself, it is a practice that can help prevent illness and maintain a healthy balance. By taking care of themselves, older people are better able to cope with the challenges of aging (7).

Functional health literacy is an emerging area of research (8). Research on functional health literacy and self-care in older people is needed to develop effective intervention strategies that can improve the quality of life of this population. Therefore, we aimed to summarise studies on the level of functional health literacy in older adults and their ability to understand and follow instructions related to self-care.

## Materials and Methods

Given the current scenario, we highlight the following problem: how does the level of functional health literacy of older people affect their ability to understand and follow instructions related to self-care? The scoping review technique is a detailed analysis of a given topic, its main approach being mapping

key concepts discussed in the literature. It is a good way to investigate/explore emerging issues (9).

Previous studies have suggested that using PubMed and Scopus to retrieve articles on functional health literacy is an assertive strategy to access the largest number of articles indexed and internationally recognized by journals in the field (5, 6, 8). Therefore, the following databases were used to carry out the scoping review National Library of Medicine (PubMed) and Scopus, using the combination of the Boolean operator "AND" and descriptors (Portuguese and English): Functional health literacy (Letramento funcional em saúde); Self-care in older people (Autocuidado em idosos); Functional health literacy for the elderly (Letramento funcional em saúde para idosos). We searched between May and June 2023.

In the eligibility of studies, we selected: Primary studies; no defined period; languages (Portuguese; English); target population (elderly). Exclusion criteria were: secondary studies; studies with a different population; studies in languages other than Portuguese, English and Spanish; duplicate studies; studies with restricted access. We used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses checklist as a search strategy. This is a method for conducting reviews that provides a structure to facilitate and organize the search for and selection of relevant studies in a particular area of research. Duplicates were removed using EndNote's duplicate identification strategy and then manually removed (10).

## Results

Using the descriptors, 437 articles were found in the PubMed (407) and Scopus (30) databases. According to the search filters, 4 articles were removed because of duplicates. From these, 433 articles were selected for title reading, of which 219 were excluded because they were unrelated to the descriptors. Of these, 214 articles were selected for abstract reading, but 163 were excluded because they did not fit the target audience. Fifty-one articles were selected for full-text reading and 46 were excluded because they had restricted access, were secondary studies, or were not compatible with the general aim of this research (Figure 1).

**Figure 1. Flowchart of the review article selection process**

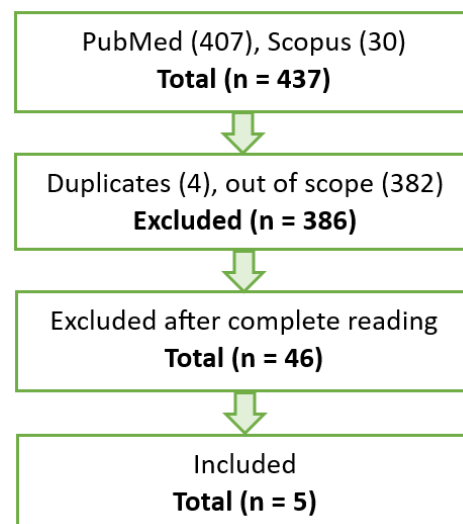


Table 1 shows the studies' synthesis. The selected studies used functional literacy tests with older people and found that the majority of participants had low levels of functional health literacy, which was associated with level of education, age, social status and gender (11–15).

A study conducted in Iran in 2015 on 360 older women (aged 60-82) found that older women with self-care behaviours that were considered poor had lower scores on the functional health literacy test, compared with participants with high self-care behaviours, who had higher scores on the functional health literacy test (12).

Research has shown that when older people have low levels of functional health literacy, they have difficulty understanding simple and complex information about their health, prescribed medications and treatment instructions. These authors showed that older people with diabetes who had low levels of functional health literacy were less engaged in self-management/self-care behaviours and had poorer health management outcomes. We have found a limited understanding of aspects of chronic disease care, poor decision making and lack of adherence to treatment (11, 14, 16).

Studies agree that adequate treatment adherence is fundamental to health care's effectiveness. If older adults have difficulty understanding instructions for self-care, they may have difficulty taking medications correctly, attending follow-up appointments, or adopting healthy lifestyles (11–15).

Low levels of functional health literacy make it difficult to understand and use health information, including making appointments, reading tests, understanding medical forms and preventing illness. It also affects interactions with healthcare professionals (3).

### Discussion

Low functional health literacy is a particular concern for older people, as they are more likely to use health services due to concerns

about managing their health and chronic conditions (15).

When basic functional health literacy skills are considered inadequate, this has a direct impact on the ability to understand and follow instructions for self-care, as older people have difficulty understanding treatment instructions, such as reading and handling prescriptions and leaflets. Understanding preventive and health promotion interventions (3).

Functional health literacy is related to the promotion of self-care. This important technique refers to people's ability to obtain, understand and use relevant information to make informed decisions about their health care (17).

By understanding, interpreting and correctly applying health information, the older person becomes and/or remains healthy; accurately prevents and/or manages disease (18). With adequate functional health literacy, older adults can make informed decisions about their own health, take preventive measures, adhere to prescribed treatments, and seek appropriate medical care. Functional health literacy empowers individuals to become active participants in their own self-care, improving their ability to manage their health.

It is important to consider levels of functional health literacy when investing in self-care. Functional health literacy affects people's ability to understand and use health information effectively. When assessing your own self-care, it is helpful to consider your level of functional health literacy to identify areas that may need more attention (1, 17, 19).

Table 1. Studies synthesis

Author	Title	Objective	Design
(Ganguli et al., 2021).	Aging and Functional Health Literacy: A Population-based Study.	To investigate functional health literacy and its associated factors among older adults drawn from a disadvantaged area.	Cross-sectional epidemiologic study.
(Klinovszky et al., 2021)	Building a House of Skills— A Study of Functional Health Literacy and Numeracy among Patients with Type 2 Diabetes in Hungary	To explore functional health literacy (FHL) and numeracy skills in an insulin-treated, type 2 diabetes mellitus (T2DM) patient population, and their impact on diabetes self-care activities	Non-experimental, cross-sectional quantitative study.
(Santos et al., 2016)	Conditions of functional health literacy of an elderly diabetics group.	To evaluate the conditions of functional health literacy of an elderly diabetics group.	Cross-sectional and descriptive study
(Mahdizadeh et al., 2018)	Relationship between self-care behaviors and health literacy among elderly women in Iran, 2015.	To identify the relationship between self-care behaviors and health literacy among elderly women in Iran.	Descriptive and analytic study.
(Uemura et al., 2021)	The Effectiveness of an Active Learning Program in Promoting a Healthy Lifestyle among Older Adults with Low Health Literacy: A Randomized Controlled Trial.	To examine the effects of an active learning program on health literacy, lifestyle behaviors, physical function, and mental health among community-dwelling older adults with low health literacy	Single-blind, randomized controlled trial

Finally, this study has important limitations. For example, we did not assess the methodological quality of the selected studies, as they have different designs. In addition, we only accessed articles in the English and Portuguese languages of the studies and therefore suggest further research.

### Conclusions

Research shows that the level of functional health literacy of older people has a significant impact on their ability to understand and follow instructions for self-care. This has a direct impact on the quality of life of older people. Given the demographic

trends in Brazil regarding the increase in the number of elderly people and the negative impact of low functional health literacy, mainly focused on self-care, we suggest that new research with strategies aimed at functional health literacy and the promotion of self-care should be carried out in order to contribute to improving the quality of life of this population.

**Acknowledgments:** We would like to thank the Coordination for the Improvement of Higher Education Personnel (CAPES), and the Universidade Federal do Tocantins (UFT)

**Availability of data and materials:** The data and materials in this paper are available

from the corresponding author on request (André Pontes-Silva).

**Conflict of interest:** There are no conflicts of interest.

**Consent for publication:** Not applicable.

**Ethical approval and consent to participate:** All experiments were conducted in accordance with the tenets of the Declaration of Helsinki.

**Funding:** This study was partially supported by the Coordination for the Improvement of Higher Education Personnel (CAPES, code 001). The funding source had no role in the study design, collection, analysis, interpretation of data, writing of the report, or in the decision to submit the article for publication.

**Authors contributions:** all authors – Conceptualization, Data curation, Formal Analysis, Investigation, Methodology, Validation, Visualization, Writing (original draft, review, and editing).

## References

- 1- Dos Santos Barcelos A, Ribeiro EM, Dias FCF, de Carvalho Silva E, Osório NB, Neto LSS. O efeito das ações de educação em saúde no autocuidado de idosos participantes da Universidade da Maturidade: um estudo quase-experimental. *Res Soc Dev.* 2022; 11(10):e97111032261-e97111032261. <https://doi.org/10.33448/rsd-v11i10.32261>.
- 2- Lima M de FG, Vasconcelos EMR de, Borba AK de OT, Carvalho JC, Santos CR dos. Letramento funcional em saúde e conhecimento do idoso sobre a doença renal crônica. *Enferm Foco.* 2021; 12(2):372-8. <https://doi.org/10.21675/2357-707X.2021.v12.n2.4374>.
- 3- Scortegagna H de M, Santos PCS dos, Santos MIP de O, Portella MR. Letramento funcional em saúde de idosos hipertensos e diabéticos atendidos na Estratégia Saúde da Família. *Esc Anna Nery.* 2021; 25:e20200199. <https://doi.org/10.1590/2177-9465-ean-2020-0199>.
- 4- Passamai M da PB, Sampaio HA de C, Dias AMI, Cabral LA. Letramento funcional em saúde: reflexões e conceitos sobre seu impacto na interação entre usuários, profissionais e sistema de saúde. *Interface-Comunicação, Saúde, Educ.* 2012; 16: 301-14. <https://doi.org/10.1590/S1414-32832012005000027>.
- 5- Araújo I, Nardi SF, Figueiredo FW dos S, Moraes KL, Pontes-Silva A, Maciel E da S. Assessment of the Functional Health Literacy in Parents and Infant Caregivers: A Cross-Sectional Study. *Retos [Internet].* 2025 Dec 7; 63:119-27. <https://doi.org/10.47197/retos.v63.108683>.
- 6- Jafari A, Naddafi, Fatemehzahra, Gholian Aval M, Tehrani H. Relationship between diabetes health literacy, distress, burnout, social support, complications, self-care behaviors, and quality of life among patients with type 2 diabetes: a path analysis study. *Diabetology & Metabolic Syndrome.* 2024; 16(1):150. <https://doi.org/10.1186/s13098-024-01375-z>.
- 7- De Carvalho Silva E, Ribeiro EM, Figueiredo AFB, Osório NBNB, Neto LSS. Relação entre condições socioeconômicas e o perfil do autocuidado dos idosos Universidade da Maturidade da Universidade Federal do Tocantins. *Res Soc Dev.* 2022; 11(9):e48311931732-e48311931732. <https://doi.org/10.33448/rsd-v11i9.31732>.
- 8- Araújo I, Junior IBN, Rodrigues Peixoto Quaresma F, Pontes-Silva A, Maciel E da S. A scoping review on health literacy in parental educational practices: What do we know about it? *Health Educ [Internet].* 2024 Jan 1; ahead of print (ahead-of-print). Available from: <https://doi.org/10.1108/HE-04-2024-0048>.
- 9- De Lima Simch FB, de Andrade SM, Azeredo LM, Pesarico JP. Papel do letramento em saúde nos desfechos clínicos de idosos: uma revisão de escopo. *Res Soc Dev.* 2021; 10(11):e495101119726-e495101119726. <https://doi.org/10.33448/rsd-v10i11.19726>.
- 10- Dourado AS, Melo DO. PRISMA 2020-checklist para relatar uma revisão sistemática. *Estud para Melhores Evidências Cochrane Disponível em https://eme.cochrane.org/prisma-2020-checklist-para-relatar-uma-revisao-sistemica/* Acesso em julho. 2023.
- 11- Santos MIP de O, Portella MR. Condições do letramento funcional em saúde de um grupo de idosos diabéticos. *Rev Bras Enferm.* 2016; 69:156-64. <https://doi.org/10.1590/0034-7167.2016690121i> PMID: 26871229.
- 12- Mahdizadeh M, Solhi M. Relationship between self-care behaviors and health literacy among elderly women in Iran, 2015. *Electron physician.* 2018; 10(3):6462. <https://doi.org/10.19082/6462> PMID: 29765570 PMCID: PMC5942566.
- 13- Ganguli M, Hughes TF, Jia Y, Lingler J, Jacobsen E, Chang C-CH. Aging and functional health literacy: a population-based study. *Am J Geriatr Psychiatry.* 2021; 29(9):972-81. <https://doi.org/10.1016/j.jagp.2020.12.007> PMID: 33349506 PMCID: PMC8197766.
- 14- Klinovszky A, Papp-Zipernovszky O, Buzás N. Building a house of skills-A study of functional health literacy and numeracy among patients with type 2 diabetes in Hungary. *Int J Environ Res Public Health.* 2021; 18(4):1547. <https://doi.org/10.3390/ijerph18041547> PMID: 33561956 PMCID: PMC7915100.
- 15- Uemura K, Yamada M, Okamoto H. The effectiveness of an active learning program in promoting a healthy lifestyle among older adults with low health literacy: a

- randomized controlled trial. *Gerontology*. 2021; 67(1):25-35. <https://doi.org/10.1159/000511357> PMID: 33271536.
- 16- Santos MIP de O, Portella MR. Conditions of functional health literacy of an elderly diabetics group. *Rev Bras Enferm*. 2016; 69:156-64. <https://doi.org/10.1590/0034-7167.2016690121i> PMID: 26871229.
  - 17- Lima M de FG, Carvalho JC, Vasconcelos EMR, Borba AKOT, Zimmermann RD, Costa EFF. The importance of evaluation of functional health lettering in the elderly: integrative review. *Rev Enferm Atual Derme*. 2019; 90(28).
  - 18- Romero SS, Scortegagna H de M, Doring M. Nível de letramento funcional em saúde e comportamento em saúde de idosos. *Texto Context*. 2019; 27:e5230017. <https://doi.org/10.1590/0104-07072018005230017>.
  - 19- Göransson C, Wengström Y, Hälleberg-Nyman M, Langius-Eklöf A, Ziegert K, Blomberg K. An app for supporting older people receiving home care-usage, aspects of health and health literacy: a quasi-experimental study. *BMC Med Inform Decis Mak*. 2020; 20(1):1-10. <https://doi.org/10.1186/s12911-020-01246-3> PMID: 32933500 PMCID: PMC 7493150.