

RIASE

REVISTA IBERO-AMERICANA DE SAÚDE E ENVELHECIMENTO
REVISTA IBERO-AMERICANA DE SALUD Y ENVEJECIMIENTO

**COGNITIVE DECLINE AND FUNCTIONAL PERFORMANCE
IN INSTRUMENTAL ACTIVITIES IN OLDER PEOPLE RESIDENT
IN THE COMMUNITY**

**DECLÍNIO COGNITIVO E DESEMPENHO FUNCIONAL
EM ATIVIDADES INSTRUMENTAIS EM PESSOAS IDOSAS
RESIDENTES NA COMUNIDADE**

**DECLIVE COGNITIVO Y RENDIMIENTO FUNCIONAL EN
ACTIVIDADES INSTRUMENTALES EN PERSONAS MAYORES
RESIDENTES EN LA COMUNIDAD**

Estéfane Beatriz Leite de Morais¹, Nathália Priscilla Medeiros Costa Diniz¹,
Kalyne Patricia de Macedo Rocha¹, Larissa Amorim Almeida¹,
Catharinne Angélica Carvalho de Farias¹, Gilson de Vasconcelos Torres^{1,2}.

¹Federal University of Rio Grande do Norte, Natal, Brazil.

²Catholic University of Murcia, Murcia, Spain.

Received/Recebido: 2024-11-21 Accepted/Aceite: 2024-11-21 Published/Publicado: 2024-11-21

DOI: [http://dx.doi.org/10.60468/r.riase.2024.10\(0\).691.44-56](http://dx.doi.org/10.60468/r.riase.2024.10(0).691.44-56)

©Author(s) (or their employer(s)) and RIASE 2024. Re-use permitted under CC BY-NC. No commercial re-use.
©Autor(es) (ou seu(s) empregador(es)) e RIASE 2024. Reutilização permitida de acordo com CC BY-NC. Nenhuma reutilização comercial.

ABSTRACT

Introduction: Human aging is a natural and inevitable process, which occurs heterogeneously according to different determinants. Mild cognitive decline affects individuals' daily lives, as it negatively interferes with functionality. This characteristic can be measured according to the activities of daily living.

Objectives: This study aims to associate cognitive decline and functional performance in the elderly.

Methods: Cross-sectional study with a quantitative approach, being a sample of the project of the International Research Network on vulnerability, health, safety and quality of life in the elderly. The instruments used in this study were: Elderly Health Record, Mini Mental State Examination questionnaire and Functioning Scale (Lawton) and PRISMA-7.

Results: The research was carried out with a total of 200 elderly people and included two analysis groups. The first group concerns sociodemographic characterization and the second group refers to the characterization of functional performance. About the total sample, 150 elderly people were classified as dependent and 50 as independent and 23 elderly people presented cognitive loss, while 177 maintained preserved cognition.

Conclusion: It was possible to observe that all activities classified as instruments of daily life were significantly affected and to understand that these are fundamental for maintaining people's autonomy. From this, it is considered that the present study was successful in addressing the objectives of associating cognitive state with functional performance.

Keywords: Aging; Cognitive Dysfunction; Functional Status.

RESUMO

Introdução: O envelhecimento humano é um processo natural e inevitável, o qual ocorre de maneira heterogênea de acordo com diferentes determinantes. O declínio cognitivo leve afeta o cotidiano dos indivíduos, pois interfere negativamente na funcionalidade. Essa característica pode ser medida de acordo com as atividades de vida diária.

Objetivos: Analisar a associação entre o estado cognitivo e desempenho funcional em AIVD em pessoas idosas residentes na comunidade para poder traçar um perfil para esse público e entender o cenário.

Método: Estudo transversal com abordagem quantitativa, sendo um recorte do projeto da Rede internacional de pesquisa sobre vulnerabilidade, saúde, segurança e qualidade de vida do idoso. Os instrumentos utilizados neste estudo foram: Caderneta de Saúde da Pessoa

Idosa, questionário do Mini Exame do Estado Mental e Escala de Funcionalidade (Lawton) e PRISMA-7.

Resultados: A pesquisa foi realizada com um total de 200 idosos e contou com dois grupos de análise. O primeiro grupo diz respeito à caracterização sociodemográfica e o segundo grupo se refere à caracterização do desempenho funcional. Do total da amostra, 150 idosos foram classificados como dependentes e 50 como independentes e 23 idosos apresentaram perda cognitiva, enquanto 177 mantiveram a cognição preservada.

Conclusão: Foi possível observar que todas as atividades enquadradas como instrumentais de vida diária foram afetadas de forma significativa e compreender que estas são fundamentais para a manutenção da autonomia das pessoas. A partir disso, considera-se que o presente estudo obteve êxito ao se tratar dos objetivos de associar o estado cognitivo ao desempenho funcional.

Palavras-chave: Disfunção Cognitiva; Estado Funcional; Envelhecimento.

RESUMEN

Introducción: El envejecimiento humano es un proceso natural e inevitable que ocurre de manera heterogénea según diferentes determinantes. El declive cognitivo leve afecta la vida cotidiana de las personas, ya que interfiere negativamente en la funcionalidad. Esta característica puede medirse según las actividades de la vida diaria.

Objetivos: Este estudio tiene como objetivo asociar el declive cognitivo y el rendimiento funcional en personas mayores.

Métodos: Estudio transversal con enfoque cuantitativo, siendo un recorte del proyecto de la Red Internacional de Investigación sobre Vulnerabilidad, Salud, Seguridad y Calidad de Vida de las Personas Mayores. Los instrumentos utilizados en este estudio fueron: Libreta de Salud del Anciano, cuestionario del Mini Examen del Estado Mental y Escala de Funcionalidad (Lawton) y PRISMA-7.

Resultados: La investigación se realizó con un total de 200 personas mayores y comprendió dos grupos de análisis. El primer grupo se refiere a la caracterización sociodemográfica y el segundo grupo se refiere a la caracterización del rendimiento funcional. Del total de la muestra, 150 personas mayores fueron clasificadas como dependientes y 50 como independientes, y 23 personas mayores mostraron deterioro cognitivo, mientras que 177 mantuvieron la cognición preservada.

Conclusión: Fue posible observar que todas las actividades categorizadas como actividades instrumentales de la vida diaria se vieron afectadas de manera significativa y comprender que estas son fundamentales para mantener la autonomía de las personas. Desde esta

perspectiva, se considera que el presente estudio logró alcanzar sus objetivos de asociar el estado cognitivo con el rendimiento funcional, teniendo en cuenta la ejecución de las actividades instrumentales de la vida diaria.

Descriptor: Disfunción Cognitiva; Envejecimiento; Estado Funcional.

INTRODUCTION

Human aging is a natural and inevitable process that occurs heterogeneously according to various determinants influencing its development. Factors such as sex, socio-economic and gender relations, culture, place of residence, sexual orientation, and ethnic-racial relations determine the course of the aging process⁽¹⁾.

To better understand this human process and its developments, it is necessary to know two important concepts according to the Brazilian Society of Geriatrics and Gerontology (SBGG): senescence and senility⁽²⁾. The first refers to the natural process of aging of the systems that make up the human being, while the second can be associated with the first and is characterized by the occurrence of pathophysiological processes, that is, it is senescence associated with the presence of diseases⁽²⁾.

A mild cognitive decline is an event that occurs due to the aging processes (senescence) and can be exacerbated by the presence of diseases (senility)^(3,4). This situation affects individuals' daily lives, as it negatively interferes with functionality regarding Instrumental Activities of Daily Living (IADL)^(3,4). This degradation begins subtly and is often not detected in time for early interventions to be executed⁽⁵⁾. Consequently, progression to dementia is common⁽⁵⁾.

The World Health Organization (WHO) defines healthy aging as "the process of developing and maintaining functional capacity that enables well-being in advanced age"⁽⁶⁾. Thus, it is interesting to observe the functional characteristics maintained by the older population, which depend on individuals' physical and mental conditions and are essential for personal maintenance and human survival⁽¹⁾.

Functionality can also be measured based on Activities of Daily Living, which can be divided into Basic Activities of Daily Living (BADL) and IADL, the latter referring to actions performed to manage the environment and routine functioning of the individual. Some of these are: using the mobile, managing finances, preparing meals, and performing household tasks^(7,8). Reduced performance in IADL may indicate the onset of cognitive decline and often precedes a lower efficiency in performing BADL⁽⁹⁾.

Given the above and considering that the world population is aging at an increasingly rapid pace, it is vital to have studies that expose this issue^(1,10). This way, more discussions will be fostered, the problem will be better understood, and interventions will arise. Therefore, this study aimed to analyze the association between cognitive state and functional performance in IADL in older adults living in the community to outline a profile for this group and understand the scenario.

MATERIALS AND METHODS

This is a cross-sectional study with a quantitative approach, part of the longitudinal and multicenter project of the International Research Network on Vulnerability, Health, Safety, and Quality of Life of Older Adults: Brazil, Portugal, Spain, and France.

The study targeted the older population residing in the community of Santa Cruz, a city in the interior of the state of Rio Grande do Norte, Brazil, served by the region's Primary Health Care (PHC).

Sampling was conducted through a probabilistic method, using sample calculations for finite populations of older individuals served by the PHC. The sample calculation was based on a 95% confidence level ($Z = 1.96$), a sampling error ($e = 0.05$), an estimated proportion of expected success (P) of 50%, and an expected error (Q) of 50% of individuals served by the PHC, resulting in an estimated sample of 200 older adults.

The inclusion criteria were being aged 60 years or older and registered or a user of a primary health care unit. The exclusion criterion was any impediment to participation in the study, as evaluated by the researcher or based on information from PHC professionals.

Data collection instruments included the Health Handbook for Older Adults⁽¹¹⁾ for collecting sociodemographic and health data; the Mini-Mental State Examination (MMSE)⁽¹²⁾, which assesses the cognitive level of the older population; and the Lawton Scale⁽¹³⁾, which evaluates IADL performance.

Sociodemographic and health characteristics were collected from the Health Handbook for Older Adults⁽¹²⁾ and analyzed according to sex (male; female), age range in years (60 to 79 years; ≥ 80 years), race/color (white; non-white), and literacy (illiterate; literate).

The Lawton Scale, adapted for the Brazilian context⁽¹³⁾, measures independence in performing IADL by analyzing the following actions: using the telephone, shopping, preparing food, doing household chores, using transportation, managing medication, and handling money. The final score ranges from 8 to 24, with independence associated with higher scores. In this study, individuals with scores < 8 were considered dependent.

Data collection was carried out between July and December 2023 by a multidisciplinary team that received prior training and included researchers, collaborators, and postgraduate and undergraduate students.

Participants who attended the inclusion criteria and agreed to participate in the study were informed about the research and invited to sign the Informed Consent Form. The multicenter project was approved by the Research Ethics Committee of Onofre Lopes University Hospital at the Federal University of Rio Grande do Norte with opinion no. 4267762 and CAAE: 36278120.0.1001.5292.

Data were tabulated and analyzed using the Statistical Package for the Social Science (SPSS) software version 23.0. Descriptive analyses of study variables were performed using absolute and relative frequency distribution for categorical variables. The association between cognitive state and sociodemographic variables and performance in IADL was analyzed using Pearson's chi-square test, considering a significance level of 5%.

RESULTS

The study included a total of 200 older adults. The analysis focused on cognitive status (low cognition and preserved cognition), evaluating sociodemographic characteristics and dependence in IADL execution. Based on the analysis of Table 1^ª, it is observed that the sample predominantly comprised females (68.0%), aged between 60 and 79 years (71.5%), literate (75%), and non-white race/color (61.0%). In this sample, preserved cognition was predominant, with 88.5% (n = 177) of the participants exhibiting cognitive preservation.

Upon evaluating the association between cognitive status and sociodemographic variables, significant associations were found in individuals aged between 60 and 79 years ($p < 0.001$) and those who were literate ($p = 0.003$) were more likely to have preserved cognition. While the sample included younger older adults, a higher proportion of those aged 80 and above and illiterate demonstrated cognitive impairment. For education, non-literate participants exhibited a lower tendency for preserved cognition when compared to literate participants (Table 1^ª).

Table 2^ª demonstrates the association between cognitive status and dependence or independence in IADL performance. Among the older adults evaluated, 75% (n = 150) were classified as dependent. Table 2^ª also shows that cognitive status exhibited a statistically significant association with all variables related to IADL functional performance.

In IADL performance, the majority showed independence for medication use (76.5%), mobile use (65.0%), meal preparation (60.5%), shopping (58.5%), and money handling (58.5%). Only in the travel category did dependence predominate (60.5%). Older adults with preserved cognition demonstrated greater independence in IADL, whereas those with low cognition exhibited higher levels of dependence (Table 2^ª).

Further analysis of the association between cognitive status and IADL functional performance showed that preserved cognition was significantly associated with independence in mobile use ($p < 0.001$), shopping ($p < 0.001$), meal preparation ($p < 0.001$), money handling ($p < 0.001$), medication use ($p = 0.001$), and domestic tasks ($p = 0.004$). Only in travel was low cognition associated with dependence in performing this IADL ($p = 0.006$) (Table 2^ª).

The final classification indicated that most older adults (64.0%) were considered dependent but with preserved cognition, resulting in a significant association ($p = 0.018$). This outcome differs from what was observed for individual IADL, where preserved cognition was linked to higher independence among older adults (Table 2^ª).

DISCUSSION

Initially, it is important to consider that sociodemographic characteristics can significantly impact cognitive decline in individuals. Age is one of the primary factors contributing to this event, as senescence entails various morphological brain modifications, resulting in noticeable brain atrophy with a loss of volume. In addition to these natural bodily changes, aging may trigger processes of senility, with certain neurodegenerative conditions further intensifying cognitive decline⁽¹⁴⁾.

The present study demonstrated that individuals aged over 80 years were more likely to experience cognitive impairment compared to those within the 60-79 age group. This characteristic aligns with the broader pattern observed among community-dwelling older adults.

Another critical factor to note is education. As seen in Table 1[†], cognitive decline is prevalent among non-literate older adults. This pattern can be explained by the assertion that intellectual activities, such as reading and learning, help delay the degradation of cognitive and social functions. Thus, a higher level of education offers greater protection for cognitive activities and aids in their recovery⁽¹⁵⁾.

Cognitive decline brings about significant complications, including compromised spatial awareness, memory loss, language skills, and spatial-temporal classification, among others^(9,16). Given the pattern of cognitive impairment within this population, it is essential to associate this event with instrumental activities of daily living (IADL), as these are fundamental to quality of life, well-being, and independence and are impacted by the complications initially mentioned^(9,16,17).

The first activity found to be compromised was mobile use. This study shows that, of the 70 individuals dependent on others for making calls, 9.5% had cognitive impairment. In contrast, among the 130 who could independently make calls, only 2% experienced cognitive deficits.

To adapt to technological advances in electronic devices, individuals must be able to learn and handle new situations. However, those with functional decline cannot adapt due to impacted learning abilities. Studies show that immediate recall and new learning abilities are negatively affected by cognitive decline, as episodic memory, involving complex neuronal interactions, is compromised⁽¹⁸⁾.

Regarding memory, and specifically focusing on attention, it is suggested that working memory, a form of attention-based function, encodes memory while retrieving information from long-term storage⁽¹⁹⁾. This aspect is evident in activities such as meal preparation, medication use, and money management, which rely heavily on working memory. In this study, 9%, 9%, and 6% of older adults respectively were classified with cognitive decline in these actions.

Other significant activities observed included shopping, domestic tasks, and travel. For the activities mentioned, the study showed that, for the first one, 9% of dependent individuals were classified with loss of cognition. In the second, the percentage was maintained for the same profile. Finally, in the third, 10% of those dependents were classified as having cognitive impairment.

This situation aligns with findings that associate cognitive decline with spatial orientation deficits⁽²⁰⁾. Spatial disorientation is characterized by impairments in actions such as establishing relationships between positions, directions, movements of objects, and points in space. Without these skills, carrying out essential activities such as shopping and travel becomes more challenging for older adults⁽²⁰⁾.

Considering all the information presented in this study, it is clear that independence among this population was impacted. However, similar patterns are observed globally according to the literature. Thus, measures should be implemented to intervene in pathological aging and promote a healthy aging process. For example, early cognitive training and rehabilitation for individuals with cognitive dysfunction, such as those recovering from a stroke, have shown promising results⁽¹⁶⁾.

The limitations of this article relate to the scarcity of studies addressing the various IADLs and the specific impact of performance decline in each on the daily lives of older adults. It is hoped that the present study will contribute to future research, promoting a greater focus on health in aging.

CONCLUSION

Based on the findings, it is evident that cognitive deficits directly impact the functionality of older individuals, as observed in this study through the relationship between IADL dependence and cognitive impairment. All activities categorized as instrumental daily living activities were significantly affected, emphasizing their importance for maintaining autonomy in this population.

Therefore, this study successfully achieved its objectives by associating cognitive status with functional performance, particularly in the execution of IADL. Additionally, it enabled a clearer understanding of the profile of this aging population.

In conclusion, the importance of further discussing this topic and developing interventions to preserve functionality in this demographic is evident. Such efforts would ensure that the aging process occurs as naturally as possible, supporting a healthier, more autonomous experience.

REFERENCES

1. Ministério da Saúde. Boletim Temático da Biblioteca do Ministério da Saúde. 2.^a ed. Brasil: Secretaria-Executiva; 2022. [accessed 2024 April 16]. Available from: <https://bvsmis.saude.gov.br/boletins-tematicos-2022/&sa=D&source=docs&ust=1713919025103435&usg=AOvVaw2v4lkCGf-CXG0ukGQXStOT>
2. Sousa NMF, Brucki SMD. Exame cognitivo III de Addenbrooke: utilidade diagnóstica para detectar comprometimento cognitivo leve e demência na doença de Parkinson. *Arq Neuropsiquiatr*. 2023;81(2):155-163. Available from: <https://doi.org/10.1055/s-0042-1758448>
3. Chen Z., Xie H Yao, L, Wei, Y. Distúrbio olfativo e o risco de declínio cognitivo e demência em idosos: uma metanálise. *Brazilian Journal of Otorhinolaryngology*. 2021;87:94-102. Available from: <https://doi.org/10.1016/j.bjorl.2020.07.009>
4. Hartle L, Martorelli M, Balboni G, Souza R, Charchat-Fichman H. Diagnostic accuracy of CompCog: reaction time as a screening measure for mild cognitive impairment. *Arquivos de Neuro-Psiquiatria*. 2022;80(06):570-579. Available from: <https://doi.org/10.1590/0004-282X-ANP-2021-0099>
5. Organização Mundial da Saúde. [accessed 2024 April 16]. Disponível em: <https://www.paho.org/pt/envelhecimento-saudavel>
6. Mello AMS, Moreira RDS, Silva VD. Estado funcional e fatores associados em pessoas idosas residentes na ilha de Fernando de Noronha: um estudo seccional. *Revista Brasileira de Geriatria e Gerontologia*. 2023;26:e230050. Available from: <https://doi.org/10.1590/1981-22562023026.230050.pt>
7. Cloutier S, Chertkow H, Kergoat MJ, Gélinas I, Gauthier S, Belleville S. Trajectories of decline on instrumental activities of daily living prior to dementia in persons with mild cognitive impairment. *International Journal of Geriatric Psychiatry*, 2021; 36(2):314-323. Available from: <https://doi-org.ez18.periodicos.capes.gov.br/10.1002/gps.5426>
8. Chae HJ, Lee SH. Effectiveness of online-based cognitive intervention in community-dwelling older adults with cognitive dysfunction: A systematic review and meta-analysis. *International Journal of Geriatric Psychiatry*. 2023;38(1):e5853. Available from: <https://doi-org.ez18.periodicos.capes.gov.br/10.1002/gps.5853>
9. Liu Y, Ma W, Li M, Han P, Cai M, Wang F, et al. Relationship between physical performance and mild cognitive impairment in Chinese community-dwelling older adults. *Clinical Interventions in Aging*, 2021; 119-127. Available from: <https://doi.org/10.2147/CIA.S288164>
10. Brasil. Caderneta de Saúde da Pessoa Idosa, 4.^a ed. Ministério da Saúde. 2017.
11. Bertolucci, PHF, Brucki SMD, Campacci SR, Juliano Y. O Mini-Exame do Estado Mental em uma população geral: impacto da escolaridade. *Arquivos de Neuro-Psiquiatria*. 1994;52(1):01-07. Available from: <https://doi.org/10.1590/S0004-282X1994000100001>
12. Lopes B, Santos D, Virtuoso Júnior R, Sindra J. Confiabilidade da versão brasileira da escala de atividades instrumentais da vida diária. *Revista Brasileira Em Promoção Da Saúde*. 2008;21:290-296. Available from: <http://www.redalyc.org/articulo.oa?id=40811508010>

13. Blinkouskaya Y, Weickenmeier J. Brain shape changes associated with cerebral atrophy in healthy aging and Alzheimer's disease. *Frontiers in Mechanical Engineering*; 2021;7:705653. Available from: <https://doi-org.ez18.periodicos.capes.gov.br/10.1002/gps.5853>

14. Wu Y, Zhang X, He Y, Cui J, Ge X, Han H. Previsão da doença de Alzheimer com base em dados de sobrevivência e desempenho medido longitudinalmente em escalas cognitivas e funcionais. *Pesquisa psiquiátrica*. 2020;291:113201. Available from: <https://doi.org/10.1016/j.psychres.2020.113201>

15. Xuefang, L., Guihua, W. e Fengru, M. O efeito do treinamento cognitivo precoce e da reabilitação para pacientes com disfunção cognitiva no acidente vascular cerebral. *Revista internacional de métodos em pesquisa psiquiátrica*. 2021;30(3):e1882. Available from: <https://doi-org.ez18.periodicos.capes.gov.br/10.1002/mpr.1882>

16. Borda MG, Aarsland D, Tovar-Rios DA, Giil LM, Ballard C, Gonzalez MC, Vik-Mo AO. Neuropsychiatric symptoms and functional decline in Alzheimer's disease and Lewy body dementia. *Journal of the American Geriatrics Society*. 2020; 68(10):2257-2263. Available from: <https://doi-org.ez18.periodicos.capes.gov.br/10.1111/jgs.16709>

17. Zadey S, Buss SS, McDonald K, Press DZ, Pascual-Leone A, Fried PJ. Higher motor cortical excitability linked to greater cognitive dysfunction in Alzheimer's disease: results from two independent cohorts. *Neurobiology of aging*. 2021;108:24-33. Available from: <https://doi.org/10.1016/j.neurobiolaging.2021.06.007>

18. Möller M, Borg K., Janson C, Lerm M, Normark J, Niward K, et al. Disfunção cognitiva na condição pós-COVID-19: Mecanismos, gestão e reabilitação. *Jornal de Medicina Interna*. 2023;294(5): 563-581. Available from: <https://doi.org/10.2147/CIA.S288164>

19. Costa RQM, Pompeu JE, Viveiro LAP, Brucki, SMD. Spatial orientation tasks show moderate to high accuracy for the diagnosis of mild cognitive impairment: a systematic literature review. *Arquivos de Neuro-Psiquiatria*. 2020;78:713-723. Available from: <https://doi.org/10.1590/0004-282X20200043>

Authors

Estéfane Beatriz Leite de Morais

<https://orcid.org/0000-0002-6129-2866>

Nathália Priscilla Medeiros Costa Diniz

<https://orcid.org/0000-0002-2716-0472>

Kalyne Patricia de Macedo Rocha

<https://orcid.org/0000-0002-8557-1616>

Larissa Amorim Almeida

<https://orcid.org/0000-0002-5650-7156>

Catharine Angélica Carvalho de Farias

<https://orcid.org/0000-0002-4473-3041>

Gilson de Vasconcelos Torres

<https://orcid.org/0000-0003-2265-5078>

Corresponding Author/Autora Correspondente

Estéfane Beatriz Leite de Morais – Federal University of Rio Grande do Norte, Natal, Brazil.

estefane.leite.704@ufrn.edu.br

Authors' contributions/Contributos dos autores

EM: Writing – original draft.

ND: Writing – original draft.

KR: Writing – original draft.

LA: Writing – original draft.

GF: Writing – original draft.

GT: Formal analysis, supervision, writing – review & editing.

All authors have read and agreed with the published version of the manuscript.

Ethical Disclosures

Conflicts of Interest: The authors have no conflicts of interest to declare.

Financial Support: Public Notice No. 01/2020.

Research network/UFRN, CNPq/Brazil, public notice productivity of research grants – PQ no. 09/ 2020 and public notice 18/2021 – Universal and CAPES PRINT/ UFRN Public Notice 03/2022 – Senior visiting professor abroad scholarship.

Provenance and Peer Review: Not commissioned; externally peer reviewed.

Responsabilidades Éticas

Conflitos de Interesse: Os autores declararam não possuir conflitos de interesse.

Suporte Financeiro: Edital n.º 01/2020. Rede de pesquisa/UFRN, CNPq/Brasil, edital produtividade de bolsas de pesquisa – PQ n.º 09/2020 e edital 18/ 2021 – Universal e CAPES PRINT/UFRN Edital 03/2022 – Bolsa professor visitante sênior no exterior.

Proveniência e Revisão por Pares: Não comissionado; revisão externa por pares.

©Autor(es) (ou seu(s) empregador(es)) e RIASE 2024.

Reutilização permitida de acordo com CC BY-NC.

Nenhuma reutilização comercial.

©Author(s) (or their employer(s)) and RIASE 2024.

Re-use permitted under CC BY-NC. No commercial re-use.

Table 1 – Sociodemographic characteristics of older adults attending primary health care according to cognitive status. Santa Cruz, 2024.^{↖↖↖}

Functional Performance in IADL		Cognitive Status		Total n (%)	p-value
		Low cognition n (%)	Preserved cognition n (%)		
Age range	60 to 79 years	8 (4.0)	135 (67.5)	143 (71.5)	< 0.001
	80 years or older	15 (7.5)	42 (21.0)	57 (28.5)	
Education	Literate	11 (5.5)	139 (69.5)	150 (75.0)	0
	Illiterate	12 (6.0)	38 (19.0)	50 (25.0)	
Gender	Female	14 (7.0)	122 (61.0)	136 (68.0)	0
	Male	9 (4.5)	55 (27.5)	64 (32.0)	
Race/color	White	9 (4.5)	69 (34.5)	78 (39.0)	1
	Non-white	14 (7.0)	108 (54.0)	122 (61.0)	

Table 2 – Functional performance in instrumental activities of daily living (IADL) among community-dwelling older adults according to cognitive status. Santa Cruz, 2024.[↖]

Functional Performance in IADL		Cognitive Status		Total n (%)	p-value
		Low cognition n (%)	Preserved cognition n (%)		
Mobile use	Dependent	19 (9.5)	51 (25.5)	70 (35.0)	< 0.001
	Independent	4 (2.0)	126 (63.0)	130 (65.0)	
Shopping	Dependent	18 (9.0)	65 (32.5)	83 (41.5)	< 0.001
	Independent	5 (2.5)	112 (56.0)	117 (58.5)	
Meal preparation	Dependent	18 (9.0)	61 (30.5)	79 (39.5)	< 0.001
	Independent	5 (2.5)	116 (58.0)	121 (60.5)	
Money handling	Dependent	18 (9.0)	65 (32.5)	83 (41.5)	< 0.001
	Independent	5 (2.5)	112 (56.0)	117 (58.5)	
Medication use	Dependent	12 (6.0)	35 (17.5)	47 (23.5)	1
	Independent	11 (5.5)	142 (71.0)	153 (76.5)	
Domestic tasks	Dependent	18 (9.0)	82 (41.0)	100 (50.0)	4
	Independent	5 (2.5)	95 (47.5)	100 (50.0)	
Travel	Dependent	20 (10.0)	101 (50.5)	121 (60.5)	6
	Independent	3 (1.5)	76 (38.0)	79 (39.5)	
Total	Dependent	22 (11.0)	128 (64.0)	150 (75.0)	18
	Independent	1 (0.5)	49 (24.5)	50 (25.0)	