



ORIGINAL ARTICLE


## LOCOMOTION AND BODY CARE NEEDS ASSOCIATED WITH FUNCTIONAL DISABILITY IN OLDER ADULTS: ICNP<sup>®</sup> NURSING DIAGNOSES


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### ABSTRACT

Objective: to identify the association of Nursing diagnoses related to locomotion and body care with functional disability in hospitalized older adults. Method: a descriptive and cross-sectional study conducted in 2019 with 100 older adults in a public hospital from Paraíba, Brazil. A semi-structured instrument and the Barthel Index were used, with diagnoses being listed from the ICNP<sup>®</sup>. Descriptive statistics was used for data analysis. Results: total dependence was associated with Impaired ability to perform oral hygiene, Impaired ability to perform hygiene, and Impaired mobility in bed. Severe dependence was associated with Impaired ability to perform oral hygiene, Impaired ability to perform hygiene, Impaired ability to dress, Impaired mobility, and Impaired mobility in bed. Conclusion: the diagnoses identified provide support for planning and implementing Nursing care aimed at shorter hospitalization times, preventing unfavorable health outcomes and ensuring comprehensive and individualized care for the population.

**DESCRIPTORS:** Nursing Process; International Classification for Nursing Practice; Nursing Diagnosis; Older Adults; Self-care.

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## INTRODUCTION

The increase in life expectancy began in developed countries, but later, this phenomenon spread to developing countries, doubling the number of aged people in the world. Brazil rose from three million older adults in 1960 to 14 million in 2002, with 13.9% of its current population aged  $\geq 65$  years old. Therefore, the elaboration of public policies is essential, as well as the qualification of health professionals, aiming to meet the growing demand associated with this sociodemographic scenario<sup>(1-2)</sup>.

Aging is accompanied by physiological decline, associated with morphological, biochemical, social and emotional changes. Such condition increases the older adult's susceptibility and the possibility of illness. Among the pathological changes associated with musculoskeletal decline and resulting from aging, the functional limitations responsible, among other factors, for decreasing the general mobility of the older adult and, therefore, directly interfering with the proper performance of the Activities of Daily Living (ADLs), stand out. These aspects culminate in the increase in the older adults' dependence and vulnerability to unfavorable outcomes for their health, such as hospitalizations, institutionalization, comorbidities and mortality<sup>(3-4)</sup>.

Functional capacity can be defined as the ability to exercise physical and mental activities that provide an independent and autonomous life. In order to measure the degree of this independence, it is necessary to assess domains, measured from the Basic Activities of Daily Living (BADLs) related to personal care such as dressing, eating, bathing, and others; the Instrumental Activities of Daily Living (IADLs), which cover more complex actions, such as shopping, using means of transport and telephone; and Advanced Activities of Daily Living (AADLs) related to the physical, cognitive and personal choices of each individual, such as driving a car<sup>(5-6)</sup>.

Therefore, the need to investigate the functional incapacity presented by the older adults through validated instruments is understood, instruments that identify the factors involved in this process early on, so as to effectively contribute to its prevention, in addition to providing subsidies for comprehensive and holistic care<sup>(7)</sup>. For this purpose, some instruments were created and adapted to different realities, particularly the Katz scale<sup>(8)</sup>, the Lawton and Brody scale<sup>(9)</sup> and the Barthel Index<sup>(10)</sup>, widely used in the gerontological literature.

Faced with these particularities found in the aged population, the nurse must, through the Systematization of Nursing Care (SNC) and, therefore, the Nursing Process (NP), provide comprehensive and individualized care, based on the individual's real needs. For that, the applicability of the NP relies on the execution of five stages: data collection; Nursing diagnoses; care planning; implementation; and evaluation of the care provided<sup>(11)</sup>. In addition, for the SNC to be performed satisfactorily, it is necessary to use scientific theories as support for care, among them, the Theory of Basic Human Needs by Wanda Aguiar Horta<sup>(12)</sup>, used in this study as a theoretical framework.

In view of the aforementioned provisions, the importance of developing Nursing diagnoses for older adults in the process of hospitalization is understood, which will allow the visualization of the association between the psychobiological needs, especially those related to locomotion and body care, with the presence of disabilities, generating support for decision-making for better Nursing care. In addition, the contribution expands to the possibility of standardizing care, aiming at a universal language among the health professionals, thus contributing to the development of evidence that promotes professional recognition in Nursing.

Given these considerations, this study aims at identifying the association between Nursing diagnoses related to locomotion and body care with functional disability in hospitalized older adults.

## METHOD

This is a descriptive and cross-sectional study developed from a research project entitled "Software development for the identification of ICNP® interventions" of a Higher Education Institution (HEI) located in the municipality of João Pessoa, Paraíba.

The study was conducted in the general wards and palliative care units of a public hospital, located in the municipality of João Pessoa, Paraíba, Brazil. Older adults of both genders were included, with a minimum age of 60 years old, conscious and who agreed to participate in the research. Those who did not agree to participate in the study were excluded, as well as those with communication difficulties that impaired interview conduction. After applying such criteria, 100 older adults comprised the final sample, selected for convenience.

Data collection took place from April to August 2019, by means of a non-validated semi-structured instrument divided in two stages. The first, addressing the sociodemographic and clinical characterization, as well as detailed anamnesis and physical examination, guided by the Theory of Basic Human Needs by Wanda Aguiar Horta<sup>(12)</sup>, which classifies the needs into psychobiological, psychosocial and psychospiritual; it is noteworthy that, in this study, the psychobiological dimension was emphasized, related to locomotion and body care. The second stage refers to the application of the Barthel Index, from which the functional incapacity of the older adults was assessed.

The Barthel Index, validated for the Brazilian reality, is an instrument that estimates the individual's level of independence for the BADLs, namely: autonomy in feeding, transfers, personal care, use of the bathroom, bathing, mobility, climbing and going downstairs, dressing, bowel and urinary control. The final score varied from 20 to 95 points, where <20 means total dependence; 20-35 points, severe dependence; 40-55 points, moderate dependence; and 60-95 points, slight dependence<sup>(10)</sup>.

Data analysis was carried out by means of descriptive statistics, using the tools for the acquisition of absolute and relative frequency, location measures (mean, median, minimum, maximum) and scale (standard deviation). Pearson's chi-square test was also performed to verify the association between the Barthel Index scores and the diagnoses outlined. For this, it was necessary to include the data in the Statistical Package for the Social Sciences – SPSS computer system, version 20.0, for it enables precision and generalization of the results.

The 7-axis model ICNP® taxonomy, version 2019, was used to elaborate the diagnoses, composed of Focus, Judgment, Means, Action, Time, Location and Client. The International Council of Nurses (ICN), the body responsible for the creation and development of the instrument and which, in summary, instructs that for each diagnosis elaborated, one term from the Focus axis and one term from the Judgment axis must be included, plus additional terms, as needed<sup>(13)</sup>.

The initiative called Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) was adopted to develop the study. STROBE is composed of items related to diverse information that must be present in the title, abstract, introduction, methodology, results and discussion of scientific articles that describe cross-sectional designs<sup>(14)</sup>.

The research was approved by the Ethics and Research Committee of the João Pessoa University Center, under Number 3,206,793.

## RESULTS

In this study, there was prevalence of female older adults, 63 (63%), with a mean age of 74.02 ( $\pm 9.03$ ) years old, in the age group of 80 years old or more, 26 (26%), and married/ in a stable union, 40 (40%). In relation to family arrangement, 67 (67%) reported living with a family member. Regarding their occupation, 76 (76%) reported being retired and, in relation to schooling, 60 (60%) were literate (Table 1).

Table 1 - Sociodemographic characterization of the hospitalized older adults (n=100). João Pessoa, PB, Brazil, 2019

Variable	n (%)	CI (95%)	Mean	Standard Deviation (SD)
<b>Gender</b>				
Female	63 (63)	0,533 – 0,720	-	-
Male	37 (37)	0,280 – 0,470	-	-
<b>Age</b>				
60-64 years old	16 (16)	0,097 – 0,240		
65-69 years old	20 (20)	0,130 – 0,285		
70-74 years old	21 (21)	0,138 – 0,297	74,02	9,03
75-79 years old	17 (17)	0,105 – 0,252		
80+ years old	26 (26)	0,181 – 0,351		
<b>Marital Status</b>				
Married/Stable union	40 (40)	0,243 – 0,426	-	-
Widowed	28 (28)	0,198 – 0,373	-	-
Single	24 (24)	0,164 – 0,330	-	-
Divorced	8 (8)	0,037 – 0,144	-	-
<b>Family Situation</b>				
Lives with a relative	67 (67)	0,574 – 0,757	-	-
Not reported	24 (24)	0,164 – 0,330	-	-
Lives alone	9 (9)	0,044 – 0,156	-	-
<b>Retired</b>				
Yes	76 (76)	0,670 – 0,836	-	-
No	24 (24)	0,164 – 0,330	-	-
<b>Schooling</b>				
Literate	60 (60)	0,502 – 0,693	-	-
Illiterate	40 (40)	0,307 – 0,498	-	-
Total	100 (100)			

Source: The authors (2019)

Regarding the elaboration of the Nursing diagnoses related to mobility and body care of the older adults under study, seven titles were listed, with the most prevalent being "Impaired walking" with 48 (48%), "Impaired ability to perform hygiene" with 40 (40%) and "Impaired mobility" with 39 (39%) (Table 2).

Table 2 - ICNP® Nursing diagnoses related to the locomotion and body care of hospitalized older adults, according to Horta's Theory of Basic Human Needs (n=100). João Pessoa, PB, Brazil, 2019

Nursing Diagnosis	n (%)	IC (95%)
Impaired walking	48 (48)	0,384 – 0,577
Impaired ability to perform hygiene	40 (40)	0,307 – 0,498
Impaired mobility	39 (39)	0,298 – 0,487
Impaired ability to dress	38 (38)	0,289 – 0,477
Impaired ability to perform oral hygiene	31 (31)	0,255 – 0,405
Impaired transferability	23 (23)	0,155 – 0,319
Impaired mobility in bed	16 (16)	0,097 - 0,240

Source: The authors (2019)

Regarding the Barthel Index, 51 (51%) were classified as having mild dependence, followed by severe dependence, 17 (17%), moderate dependence, 14 (14%) and total dependence, 13 (13%). The total score mean of the aforementioned index was 58.55 (SD±29.8). After performing the Chi-square test, there was a statistically significant relationship between the Barthel Index scores and some diagnoses. Therefore, total dependence was associated with: Impaired ability to perform oral hygiene ( $p=0.033$ ), Impaired ability to perform hygiene ( $p=0.011$ ) and Impaired mobility in bed ( $p<0.000$ ).

In severe dependence, an association was observed with: Impaired ability to perform oral hygiene ( $p=0.040$ ), Impaired ability to perform hygiene ( $p<0.000$ ), Impaired ability to dress ( $p=0.008$ ), Impaired mobility ( $p=0.046$ ) and Impaired mobility in bed ( $p<0.000$ ). Finally, moderate dependence showed an association with: Impaired transferability ( $p=0.032$ ) and Impaired walking ( $p=0.033$ ).

## DISCUSSION

In this study, aged females stood out, with a mean age of 74.02(±9.03) years old, in the age group of 80 years old or more and married or in a stable relationship, referring living with a family member and being retired and literate.

In relation to the Barthel Index, and after performing Pearson's Chi-square test, a statistically significant relationship was observed between that index and some diagnoses identified, with mild dependence prevailing, followed by severe dependence associated with Impaired ability to perform oral hygiene, Impaired ability to perform hygiene, Impaired ability to dress, Impaired mobility, and Impaired mobility in bed. Moderate dependence, on the other hand, was associated with Impaired transferability and Impaired walking. Finally, total dependence was associated with Impaired ability to perform oral hygiene, Impaired ability to perform hygiene, and Impaired mobility in bed.

This study identified an association between the "Impaired ability to perform hygiene" and "Impaired ability to perform oral hygiene" diagnoses with total and severe dependence. A similar result was found in a study carried out in Rio Grande do Sul, with a sample of 50 older adults, revealing that 58.2% of the participants had moderate to severe dependence for personal hygiene<sup>(2)</sup>.

For the older adults who have severe dependence, the nurse must be attentive to decision-making in the interventions, in order to provide comprehensive care to their needs, considering that the team and family members assume a large part of the care in this process, as this classification is considered a risk factor for hospitalization. Therefore, this practice must be performed by the entire multidisciplinary team or, if possible, encouragement of some self-care activity, to improve the clinical results, health status and quality of life<sup>(15)</sup>.

In contrast, hospitalization is characterized in the literature as a risk factor for total dependence in older adults; therefore, Nursing care becomes indispensable, as self-care and autonomy are absent in this context. Nursing professionals stand out for their bedside performance and ability to systematize holistic care with an emphasis on the biopsychosocial and spiritual of older adults, essential to restore their physical and mental health<sup>(15-16)</sup>.

Therefore, the "Impaired ability to dress" diagnosis was associated with severe dependence, and this can be related to musculoskeletal changes, characteristics of aging and that hinder the process of the basic activity of daily living, which is dressing. Such activity demands strength in the upper and lower limbs, motor coordination and balance, which can be impaired in the older adult. In addition, this activity can also be affected by disorientation and cognitive deficit, as they can interfere with the choice of appropriate garments<sup>(17-18)</sup>.

In this context, a survey carried out in the state of Minas Gerais identified that 7.5% of the older adults evaluated had difficulty getting dressed/grooming. The participants also revealed that there is certain discouragement in carrying out these activities. Thus, the authors emphasize the importance of encouragement by the Nursing team so that there is autonomy in performing the BADLs<sup>(16-17)</sup>.

Related to such limitations, the "Impaired mobility in bed" and "Impaired mobility" diagnoses stand out, which are associated with severe and total dependence, these being the main factors that directly affect the older adults' autonomy. Therefore, a study that aimed at describing the clinical profile of 89 aged patients admitted to the Medical Clinic unit of a hospital in Minas Gerais evidenced that 40.4% of the participants were bedridden. In addition to that, 14.6% were unable to move and 38.2% present movement limitations<sup>(19)</sup>.

Thus, musculoskeletal decline is evidenced as an inherent characteristic of physiological aging, and such change affects postural balance. Over time, older adults tend to manifest a progressive loss of bone mass, loss of muscle fibers, strength and muscle mass, causing a decrease in their functionality, such as muscle weakness, slowness of movement, early fatigue, functional limitations and decreased amplitude in joint movements, making it difficult to perform the BADLs and compromising autonomy and independence. Parallel to this, its association with higher occurrences of falls make older adults more susceptible to impaired mobility and to be bedridden<sup>(20)</sup>.

A randomized clinical trial with aged patients admitted to a hospital contributes the results that, among various forms of interventions for muscle strengthening, neuromuscular electrical stimulation (NMES) consists in the application of an electric current, of low or medium frequency, on the muscle, aiming at muscle re-education and prevention of atrophy. Its application is related to the maintenance and increase of muscle strength and endurance, in addition to increased exercise tolerance, improved balance and functionality<sup>(21)</sup>.

In sequence, the consequences caused by immobility (considered one of the geriatric syndromes, which makes older adults totally dependent to carry out their daily activities or related to self-care) are highlighted, namely: stiffness, contractures, decreased range of motion, sarcopenia, aphasia, dysphagia, pressure ulcer, urinary and fecal incontinence, and also cognitive deficit<sup>(22)</sup>.

The influence of the hospitalization process on the locomotion limitations is highlighted, considering the vulnerability presented by older adults to this stressor. The care actions performed by the Nursing team promote the rehabilitation of these limitations

and effectively prevent the onset of pressure ulcer, consequently improving their quality of life and clinical condition<sup>(23-24)</sup>.

Regarding the “Impaired walking” and “Impaired transferability” diagnoses, a statistically positive association with moderate dependence was identified. Such conditions are justified by advancing age, as gait tends to change gradually, becoming able to affect the mobility and functional capacity that older adults have to perform their BADLs, that is, it involves additional challenges, namely in terms of maintaining the individual’s safety, as they limit other dimensions of functional performance and generate greater dependence<sup>(25)</sup>.

In addition, the literature details impaired gait as a risk factor for falls, since the difficulty of walking acquired due to aging induces a slowing and shortening of gait, resulting in greater difficulties in walking and, consequently, in greater risk for falls in this population. These changes can be enhanced by the hospitalization process, due to the limitations of activities in the hospital environment, thus requiring specific Nursing interventions for each reality, with a view to seeking the older adult’s autonomy<sup>(26)</sup>.

Consequently, a relationship is observed between the dependence levels and the factors found in this study. The performance of the activities of daily living depends on the general health status and on that of motor functions, which can be compromised depending on the clinical condition, morbidities and cognitive decline; so that, according to the changes presented by the older adults, their advanced activities are the first to be lost, then the instrumental ones and, finally, the basic ones<sup>(27)</sup>.

Assessing the level of dependence of the aged person regarding mobility and body care needs is essential for effective decision-making in the stages of the Nursing process, from anamnesis and data collection to the evaluation after applying the interventions. Thus, through these diagnostic statements, it is possible to select the most appropriate Nursing interventions for each older adult, as well as to monitor their functional status.

Finally, the cross-sectional model stands out as a study limitation, which does not allow establishing cause-and-effect relationships between the variables, in addition to the research having been carried out in only one hospital setting and having a sample selected for convenience, which can generate selection bias.

## FINAL CONSIDERATIONS

It was evidenced that the proposed objective of identifying the association between ICNP® Nursing diagnoses related to locomotion and body care with functional disability in hospitalized older adults was achieved. Such diagnoses identified provide subsidies for the planning and implementation of Nursing care actions, especially those targeted at locomotion and body care for older adults, aiming at shorter hospitalization times, preventing other unfavorable outcomes for their health and, thus, ensuring comprehensive and individualized assistance for this population.

It is worth highlighting the need for new studies, especially those that carry out the design of Nursing interventions for the diagnoses identified, promoting expansion of the scientific knowledge and better clarification on the topic.

## REFERENCES

1. Ferreira JM, Hammerschmidt KS de A, Siewert JS, Alvarez AM, Locks MOH, Heidemann ITSB. Gerontotecnologia para prevenção de quedas dos idosos com Parkinson. Rev. Bras. Enferm. [Internet]. 2019 [accessed 05 jun 2020]; 72(supl.2). Available from: <https://doi.org/10.1590/0034-7167-2018-0704>.
2. Oliveira MR, Fleig TCM. Avaliação da funcionalidade em idosos institucionalizados e sua correlação com a Classificação Internacional de funcionalidade, Incapacidade e Saúde (ICF). Revista Brasileira de Iniciação Científica [Internet]. 2017 [accessed 05 maio 2020]; 4(9). Available from: <https://www.atenaeditora.com.br/post-artigo/36791>.
3. Barros TVP, Santos ADB, Gonzaga J de M, Lisboa MG da C, Brand C. Functional capacity of institutionalized elderly people: an integrative review. ABCS Health Sci. [Internet]. 2016 [accessed 18 abr 2020]; 41(3). Available from: <https://doi.org/10.7322/abcshs.v41i3.908>.
4. Siqueira AF, Rebesco DB, Amaral FA, Maganhini CB, Agnol SMD, Furmann M, et al. Efeito de um Programa de Fisioterapia Aquática no equilíbrio e capacidade funcional de idosos. Saud Pesq [Internet]. 2017 [accessed 18 abr 2020]; 10(2). Available from: <https://periodicos.unicesumar.edu.br/index.php/saudpesq/article/view/5892>.
5. Sposito G, Neri AL, Yassuda MS. Atividades avançadas de vida diária (AAVDs) e o desempenho cognitivo em idosos residentes na comunidade: dados do estudo FRIBRA polo UNICAMP. Rev. bras. geriatr. gerontol. [Internet] 2016 [accessed 27 jun 2020]; 19(1). Available from: <https://doi.org/10.1590/1809-9823.2016.15044>.
6. Santos GLA, Santana RF, Broca PV. Capacidade de execução das atividades instrumentais de vida diária em idosos: Etnoenfermagem. Esc Anna Nery. [Internet]. 2016 [accessed 27 jun 2020]; 20(3). Available from: <https://www.redalyc.org/articulo.oa?id=127745807009>.
7. Pereira LC, Figueiredo M do LF, Beleza CMF, Andrade EMLR, Silva MJ da, Pereira AFM. Factores predictores para la incapacidad funcional de adultos mayores atendidos en la atención básica. Rev. Bras. Enferm. [Internet]. 2017 [accessed 27 jun 2020]; 70(1). Available from: <https://doi.org/10.1590/0034-7167-2016-0046>.
8. Katz S, Ford AB, Moskowitz RW, Jackson BA, Jaffe MW. Studies of illness in the aged. The index of ADL: a standardized measure of biological and psychosocial function. JAMA [Internet]. 1963 [accessed 19 maio 2020]; 185(12). Available from: <https://doi.org/10.1001/jama.1963.03060120024016>.
9. Lawton MP, Brody EM. Assessment of older people: self-maintaining and instrumental activities of daily living. Gerontologist [Internet]. 1969 [accessed 19 maio 2020]; 9(3). Available from: [https://doi.org/10.1093/geront/9.3\\_Part\\_1.179](https://doi.org/10.1093/geront/9.3_Part_1.179).
10. Simões AL, Ferreira PL, Dourado M. Medição da autonomia em atividades da vida diária. Port J Public Health [Internet]. 2018 [accessed 17 abr 2020]; 36. Available from: <http://dx.doi.org/10.1159/000492139>.
11. Sousa AF de. Experiências da sistematização da assistência de enfermagem ao laringectomizado fundamentada em Wanda Horta. Essentia [Internet]. 2018 [accessed 23 abr 2020]; 19(2). Available from: <http://essentia.uvanet.br/index.php/ESSENTIA/article/view/185>.
12. Horta WA. Processo de enfermagem. Rio de Janeiro: Guanabra Koogan; 2011.
13. Conselho Internacional de Enfermeiros (CIE). CIPE Versão 2017 - Classificação Internacional para a Prática de Enfermagem. Lisboa: CIE; 2017.
14. Malta M, Cardoso LO, Bastos FI, Magnanini MMF, Silva CMFP da. Iniciativa STROBE: subsídios para a comunicação de estudos observacionais. Rev Saúde Pública [Internet]. 2010 [accessed 23 fev 2021]; 44(3). Available from: <https://doi.org/10.1590/S0034-89102010000300021>.
15. Melo BR de S, Diniz MAA, Casemiro FG, Figueiredo LC, Santos-Orlandi AA dos, Hass VJ, et al. Cognitive and functional assessment about elderly people users of health public service. Esc Anna Nery [Internet]. 2017 [accessed 05 ago 2020]; 21(4). Available from: <http://dx.doi.org/10.1590/2177-9465-ean-2016-0388>.



16. Nicolato FV, Couto AM do, Castro EAB de. Capacidade de autocuidado de idosos atendidos pela consulta de enfermagem na atenção secundária à saúde. *Enferm. Cent. O. Min* [Internet]. 2016 [accessed 05 maio 2020]; 6(2). Available from: <https://doi.org/10.19175/recom.v6i2.1016>.
17. Castro DC, Nunes DP, Pagotto V, Pereira LV, Bachion MM, Nakatani AYK. Incapacidade funcional para atividades básicas de vida diária de idosos: estudo populacional. *Ciênc Cuid Saude* [Internet]. 2016 [accessed 05 maio 2020]; 15(1). Available from: <https://doi.org/10.4025/ciencucuidsaude.v15i1.27569>.
18. Clares JWB, Guedes MVC, Silva L de F da, Nóbrega MML da, Freitas MC de. Subconjunto de diagnósticos de enfermagem para idosos na Atenção Primária à Saúde. *Rev Esc Enferm USP* [Internet]. 2016 [accessed 05 maio 2020]; 50(2). Available from: <http://dx.doi.org/10.1590/S0080-623420160000200013>.
19. Gomes NC, Poggetto MTD, Zuffi FB, Tavares DM dos S. Necessidade de cuidados de enfermagem entre idosos hospitalizados. *Rev. Enferm. Atenção Saúde* [Internet]. 2017 [accessed 06 maio 2020]; 6(2). Available from: <http://seer.uftm.edu.br/revistaelectronica/index.php/enfer/article/view/2219/pdf>.
20. Queiroz SMB, Coutinho DTR, Almeida PC de, Guedes MVC, Freitas MC de. Condições clínicas de idosos vítimas de trauma musculoesquelético. *Cienc. Cuid. Saúde.* [Internet]. 2016 [accessed 02 jul 2020]; 15(3). Available from: <https://doi.org/10.4025/ciencucuidsaude.v15i3.28482>.
21. Reidel LT, Cecchele B, Sachetti A, Calegari L. Efeitos da eletroestimulação neuromuscular de quadríceps sobre a funcionalidade de idosos frágeis e pré-frágeis hospitalizados: ensaio clínico randomizado. *Fisioter. Pesqui.* [Internet]. 2020 [accessed 22 jan 2021]; 27(2). Available from: <https://doi.org/10.1590/1809-2950/18046327022020>.
22. Paiva Filho E de, Prado VB, Andrade DDBC. Síndrome da imobilidade nos idosos associado a sarcopenia na atenção primária a saúde. *Braz. J. Develop.* [Internet]. 2020 [accessed 02 jul 2020]; 6(6). Available from: <https://doi.org/10.34117/bjdv6n6-430>.
23. Rosa PH da, Beuter M, Benetti ERE, Bruinsma JL, Venturini L, Backes C. Estressores vivenciados por idosos hospitalizados na perspectiva do Modelo de Sistemas de Neuman. *Esc Anna Nery* [Internet]. 2018 [accessed 06 maio 2020]; 22(4). Available from: <https://doi.org/10.1590/2177-9465-ean-2018-0148>.
24. Carvalho TC, Valle AP do, Jacinto AF, Mayoral VF de S, Boas PJFV. Impacto da hospitalização na funcionalidade de idosos: estudo de coorte. *Rev. Bras. Geriatr. Gerontol.* [Internet]. 2018 [accessed 06 maio 2020]; 21(2). Available from: <https://doi.org/10.1590/1981-22562018021.170143>.
25. Marques-Vieira CMA, Sousa LMM de, Sousa LMR de, Berenger SMAC. O diagnóstico de enfermagem 'andar comprometido' nos idosos: revisão sistemática da literatura. *Texto contexto - enferm.* [Internet]. 2016 [accessed 30 jun 2020]; 25(3). Available from: <https://doi.org/10.1590/0104-07072016003350015>.
26. Moura LA, Araújo JN de M, Fernandes APN de L, Carvalho REFL de, Silva HP da, Santos VEP, et al. Fatores de risco para cair em idosos no ambiente hospitalar. *Rev Cuba Enferm* [Internet]. 2017 [accessed 06 maio 2020]; 33(3). Available from: <http://revenfermeria.sld.cu/index.php/enf/article/view/1049/282>.
27. Francisco PMSB, Marques P de P, Borim FSA, Torres SF, Neri AL. Incapacidade funcional para atividades instrumentais da vida diária em idosos com doenças reumáticas. *Rev. Bras. Geriatr. Gerontol.* [Internet]. 2018 [accessed 02 jul 2020]; 21(5). Available from: <https://doi.org/10.1590/1981-22562018021.180089>.

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - Morais YJGA; Drafting the work or revising it critically for important intellectual content - Morais YJGA, Silva DF da, Santos GCV, Brasil MHF; Final approval of the version to be published - Gomes GLL, Oliveira FMRL de; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - Gomes GLL, Oliveira FMRL de. All authors approved the final version of the text.

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