FALLS IN THE ELDERLY: An Analysis of Causes Based on Sex and Age Group

QUEDAS EM IDOSOS: uma análise das causas a partir do sexo e da faixa etária

Rodrigo Luiz dos Santos Oliveira
Carlos Eduardo dos Santos de Jesus Fonseca
Alipio Rodrigues Pines Junior
José Maria Montiel
Afonso Antonio Machado
Ivan Wallan Tertuliano[1]

Abstract
This study aimed to investigate the main causes of falls among the elderly and identify the most affected population, comparing men and women, as well as young elderly individuals (aged 60 to 74) and the oldest old (75 years or older). A narrative literature review was conducted, searching for articles published between 2015 and 2025 in the Google Scholar and Ebsco databases, using descriptors such as “elderly falls,” “fall prevention,” and “fall risks” in both Portuguese and English. After applying inclusion criteria (articles from 2015 to 2025) and exclusion criteria (reviews, irrelevant topics), 18 articles were selected for qualitative analysis. The results showed that falls are multifactorial, with a higher prevalence in women due to osteoporosis and lower muscle mass, and in individuals over 75 years old, associated with frailty, comorbidities such as hypertension and diabetes, and the use of medications such as benzodiazepines. Home environments, especially bathrooms and kitchens, are the main locations, due to uneven floors, inadequate lighting, and lack of adaptations. The consequences include fractures (predominantly in lower limbs), functional decline, and increased mortality. The review revealed that multifactoriality demands preventive strategies focused on environmental adaptations and rehabilitation. Finally, advanced age, female sex, comorbidities, medications, and Frailty Syndrome are determining factors.
Keywords: Falls; Elderly; Health. Prevention; Accidents.

Resumo
Este estudo objetivou investigar as principais causas de quedas de idosos e qual é o público mais acometido, comparando homens e mulheres, bem como idosos jovens (60 a 74 anos) e longevos (75 anos ou mais). Foi realizada uma revisão narrativa de literatura, com busca de artigos publicados entre 2015 e 2025 nas bases Google Acadêmico e Ebsco, utilizando descritores como “queda de idosos”, “prevenção de quedas” e “riscos de quedas” em português e inglês. Após critérios de inclusão (artigos de 2015 a 2025) e exclusão (revisões, temas irrelevantes), 18 artigos foram selecionados para análise qualitativa. Os resultados demonstraram que as quedas são multifatoriais, com maior prevalência em mulheres, devido à osteoporose e menor massa muscular, e em idosos acima de 75 anos, associados à fragilidade, comorbidades como hipertensão e diabetes, e uso de medicamentos como

[1] Universidade Anhembi Morumbi, São Paulo, Brasil; ivanwallan@gmail.com

benzodiazepínicos. Ambientes domiciliares, especialmente banheiros e cozinhas, são os principais locais, por pisos irregulares, iluminação inadequada e falta de adaptações. As consequências incluem fraturas (predominantemente em membros inferiores), declínio funcional e aumento da mortalidade. A revisão revelou que a multifatorialidade exige estratégias preventivas centradas em adaptações ambientais e reabilitação. Por fim, idade avançada, sexo feminino, comorbidades, medicamentos e Síndrome da Fragilidade são fatores determinantes.
Palavras-chave: Quedas; Idosos; Saúde; Prevenção; Acidentes.

1 INTRODUCTION

Population aging is a global phenomenon, driven by increased life expectancy and reduced birth rates. According to the World Health Organization (WHO, 2023), a person aged 65 or older is considered elderly in developed countries and 60 or older in developing countries. In Brazil, the Statute of the Elderly Person (Brasil, 2022) defines an elderly person as someone aged 60 or older.

It is estimated that by 2050 the number of people aged 65 or older will exceed 1.5 billion worldwide, representing more than 16% of the global population (United Nations, 2022). This scenario poses new challenges to health systems and public policies, since aging is frequently associated with an increased incidence of chronic diseases, functional limitations, and adverse events such as falls, which are among the main factors of morbidity and mortality in this population (OMS, 2023; Nascimento *et al*., 2023).

Falls represent one of the main causes of unintentional injuries in older adults, with consequences that include fractures, hospitalizations, functional decline, loss of autonomy, and increased mortality (Silva *et al*., 2023; Borges *et al*., 2023). The widely accepted definition in the health field considers a fall as an unexpected event in which the individual falls to the ground or another lower level without a sufficiently strong external force to justify the event (Ambrose *et al*., 2023). Such events are particularly concerning due to their high prevalence and the associated economic and social costs.

In addition to their high frequency, falls in older adults exhibit significant variation according to sex and age group, highlighting the need for specific analyses of these factors. Recent studies suggest that older women tend to have a higher risk of falls, partly due to a higher prevalence of osteoporosis and greater longevity, while men have higher mortality associated with falls (Ferreira *et al*., 2022; Almeida; Rocha,

2023). Furthermore, the literature distinguishes between "young older adults" (60 to 74 years) and "long-lived older adults" (75 years or more), revealing distinct patterns of risk and associated outcomes (Costa *et al.*, 2023).

Given this problem, it is essential to deepen the understanding of the prevalence and factors associated with falls in the elderly, paying special attention to differences between sexes and advanced age groups. This study, based on a literature review of recent scientific articles, aimed to investigate the main causes of falls in the elderly and which population is most affected. Regarding secondary objectives, we can mention: Investigating the prevalence of falls (the population most affected by falls – women versus men; young elderly – 60 to 74 years – versus very old elderly – 75 years or more).

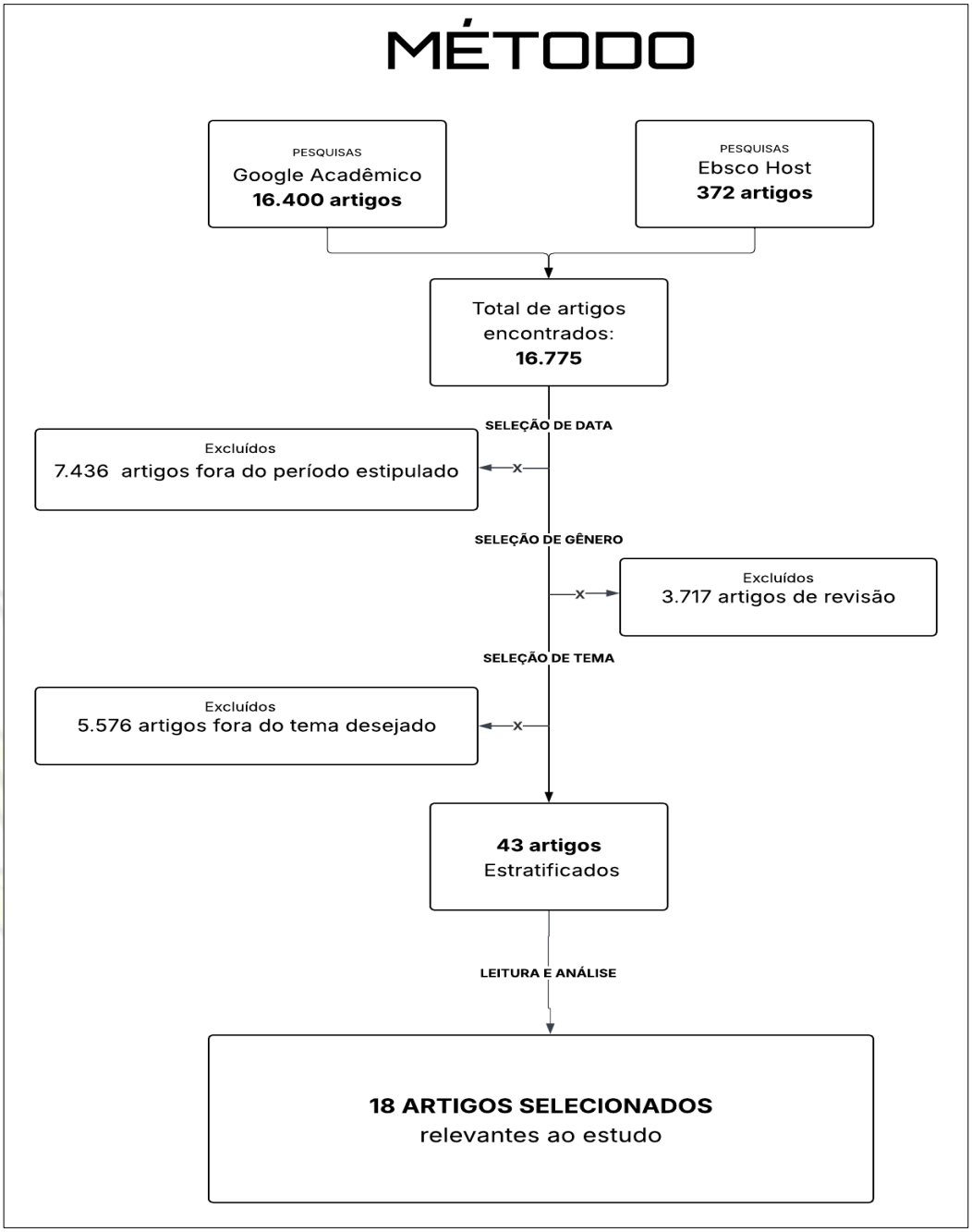
2 MATERIALS AND METHODS

A narrative review was conducted in this study. For this purpose, articles were searched for between February 2025 and June 2025. A narrative review is characterized as the type of literature review that aims to present, summarize, and critically analyze existing knowledge on a given topic, without the intention of performing a statistical analysis of the studies (Rother, 2007).

The results were found in the following databases: Google Scholar and Ebsco. The following descriptors were used: falls in the elderly, fall prevention in the elderly, causes of falls in the elderly, risks of falls, both individually and in combination. As an inclusion criterion, only articles published between 2015 and 2025 were accepted in the searches. As an exclusion criterion, review articles and those that did not contain data regarding falls in the elderly, as well as those that addressed overly broad topics, were discarded.

The research was conducted in Portuguese and English. In English English, the descriptors used The search terms were: elderly falls, prevention of elderly falls, causes of elderly falls, fall risks. Initially, 16,400 articles were found on Google Scholar and 372 on Ebsco Host, totaling 16,772 articles. Of these, 7,436 were excluded for being outside the stipulated period, 3,717 for being review articles, and 5,576 for not fitting the desired theme. This left 43 articles for reading and abstract analysis, and after this reading, only 18 articles were selected as relevant to the study.

Figure 01 - Flowchart of the results of the search in information sources, the selection and inclusion of studies in this research.



Source: Prepared by the authors, 2025

3 RESULTS AND DISCUSSION

Table 1 - Studies used in the preparation of the results of this manuscript

References	Objective	Sample	Results	Conclusion
Gautério *et al.* (2015)	To identify the risks of new accidents due to falls in the elderly.	Fifteen elderly people aged between 61 and 85 years participated, 11 of whom were female.	The falls occurred due to environmental factors (slippery or wet floors, rugs scattered on the floor, and uneven floors), combined with balance problems. Risk factors for further falls were: impaired balance (15/15), age over 65 years (11/15), use of antihypertensive agents (9/15), absence of non-slip material in the home environment (7/15); rugs scattered on the floor of the house (7/15).	The authors concluded that the combination of physical and environmental factors increased the risk of further falls.

Continuation

Moura *et al.* (2016)	To analyze the factors associated with falls among elderly patients hospitalized in public hospitals.	Fifty senior citizens aged 60 or older participated.	Falls were associated, according to prevalence, with: 1. Conditions of elderly people's homes that facilitate falls; 2. Lack of adaptation of homes to the needs of the elderly; 3. Irregular conditions of street paving; 4. Irregular conditions of sidewalks in front of houses and businesses; 5. High blood pressure and diabetes, as chronic diseases associated with falls among the elderly.	The authors concluded that the factors associated with the falls were diverse, meaning that the falls were caused by multifactorial issues.
Santos *et al.* (2016)	To analyze domestic accidents (falls) among elderly people served by the Family Health Strategy.	Eighty-three senior citizens, aged 60 or older, participated.	Falls among the elderly are associated with two factors: carelessness in observing the environment (39.8%); impaired mobility (14.5%).	The authors concluded that falls in the home are linked to a lack of environmental adaptation.
Silva and Bolpato (2017)	To understand the causes of falls among elderly people in a municipality in the interior of Ceará.	Thirty senior citizens aged 60 or older participated.	Women suffer more falls than men. Men (100%) had falls related to tripping, while women presented several factors: 42.86% due to slipping, 42.86% due to tripping, 7.14% due to footwear, and 7.14% due to other reasons.	The authors concluded that the rate of falls is more frequent among women.

Continuation

Souza *et al.* (2017)	To assess the likelihood of falls in older adults, as well as its relationship with medication use.	Twenty-two elderly individuals (81.8% female) aged 60 years or older participated.	The likelihood of falls was not influenced by sex, age group, medication use, or physical activity levels among the elderly.	The authors concluded that sex, age group, and medication use influenced the falls.
Alves *et al.* (2017)	To describe the incidence of falls among elderly people in the municipality of Barbacena, MG, including their causal factors, circumstances, and consequences.	206 seniors over 60 years of age participated.	The incidence of falls among the elderly was 36.41%, with 45.95% occurring outside the home. Of the elderly who fell and suffered a fracture (18.67%), 50% had previously suffered a stroke and 50% had chronic kidney disease, with 61.54% ceasing to perform their daily activities after the fall.	The authors concluded that fall prevention is a public health concern and that relatively simple changes can reduce the risk of falls.
Araújo Neto *et al.* (2017)	To understand the causes of falls among elderly people in a municipality in the interior of Ceará.	Forty-five elderly people participated, with an average age of 72 years.	The main causes of falls were: advanced age (more falls), hypertension (causing dizziness and loss of consciousness), and diabetes (loss of tactile sensitivity). Older elderly individuals were more susceptible to the aforementioned factors.	The authors concluded that the causes of the falls were multifactorial.

Continuation

Tomaz *et al.* (2017)	Check which medications, including benzodiazepines, antihypertensives, and diuretics, are associated with falls.	317 seniors aged 60 and over participated.	The use of diuretics did not influence the number of falls. There was an association between benzodiazepine use and falls in the last 12 months, mainly in the morning.	The authors concluded that although other contributing factors to falls were not evaluated, such as place of residence, ophthalmic problems, and gait impairment, benzodiazepines increased falls among the elderly, mainly in the morning.

Continuation

Vieira *et al.* (2018)	To assess the prevalence of falls among elderly residents in long-term care facilities.	1,451 seniors aged 60 or older participated.	The prevalence of falls among the elderly in the last year was 28.1%, and most occurred in the elderly person's own home. Among the elderly who suffered a fall, 51.5% had a single fall and 12.1% suffered a fracture as a consequence, with lower limb fractures being the most frequently reported.	The authors concluded that the occurrence of falls is still high even in institutions.
Oliveira and Marinho (2018)	To determine the prevalence of falls and analyze associated factors in older adults.	Forty senior citizens aged between 60 and 70 years participated.	The prevalence of falls was 20%, with a higher occurrence among women (62.5%) and at night (62.5%), mainly at home and in outdoor areas. The most common causes were tripping (75%) and slipping (25%), with all elderly individuals walking at the time of the fall. The use of slippers was frequent (62.5%).	The authors concluded that the continuous use of medication and unfavorable environmental conditions were determining factors in the occurrence of the falls.

Continuation

Chagas *et al.* (2018)	To analyze the relationship between body balance and the risk of falls in the elderly.	Forty-five elderly people of both sexes, aged between 65 and 90 years, participated.	Women have a higher risk of falls than men, and this is related to balance. Length of time in the program reduced the risk of falls, with seniors over 10 years having a 0% high risk. Regarding age groups, seniors aged 80 and over have a higher risk of falls than seniors between 70 and 79 years old.	The authors concluded that women are more prone to falls and that age is also a factor influencing the risk of falls.
Almeida *et al.* (2019)	To identify the risk factors and consequences associated with falls in elderly patients treated at a hospital in the interior of Maranhão.	Twenty elderly people who had suffered falls participated in the study, aged between 70 and 75 years (60% female).	The causes of the falls were related to loss of muscle tone and strength, balance disorders (dizziness), and/or lack of ambient lighting.	The authors concluded that the causes of the falls were multifactorial, highlighting loss of muscle tone and strength, dizziness, and poor lighting.
Oliveira *et al.* (2021)	To identify the prevalence of falls and associated factors among elderly individuals participating in the Family Health Strategy.	212 seniors aged 60 or older participated.	The prevalence of falls was 63.7%, predominantly in people aged between 60 and 79 years old (63.7%), female (53.8%), who used rugs at home (66.5%) and had two or more comorbidities (41.5%).	The authors concluded that the prevalence of falls in older adults was high, with women experiencing more falls.

Continuation

Vieira *et al.* (2022)	To analyze the factors associated with the risk of falls in hospitalized elderly patients.	Sixty-four seniors aged 60 or older participated.	High risk of falls in 40% of participants, associated with sex and changes in vision (aging process).	The authors concluded that sex and visual impairment were the most relevant factors in the risk of falls.
Taguchi *et al.* (2022)	To identify the prevalence of Frailty Syndrome in elderly individuals receiving care in Primary Care.	One hundred and one elderly people participated, ranging in age from 60 to 97 years old.	26.1% presented mild frailty; 15.2% moderate, and 8.7% severe frailty. The remainder did not present frailty. Sex was not a predictor of frailty. The incidence of self-reported falls in the last year was 22.7% for those who presented pre-frailty syndrome, and 28.0% for those who presented frailty syndrome.	The authors concluded that frailty and pre-frailty are associated with falls.
Caetano *et al.* (2023)	To analyze the risk of falls and its association with demographic variables, clinical factors, cognitive status, risk of sarcopenia, and frailty.	Sixty senior citizens, aged between 60 and 79 years old, participated.	Predominantly female, 80% presented cognitive impairment, 88.3% were categorized as frail, 60% presented risk for sarcopenia, and 75% had a high risk of falls.	The authors concluded that the elevated risk of falls in older adults is directly related to the presence of cognitive impairment, frailty syndrome, and the risk of sarcopenia.

Continuation

Ramos *et al.* (2024)	To analyze the risk of falls in elderly patients hospitalized in a university hospital.	174 seniors aged 60 or older participated.	51.72% presented a diagnosis of cardiovascular diseases. 57% of the elderly presented a high risk of falls, only 14.94% had safe footwear, and 97.12% of the beds lacked a functional companion.	The authors concluded that most elderly individuals presented a high risk of falls, and furthermore, there are flaws in the implementation of preventive measures that contribute to this risk.
Gil *et al.* (2025)	To determine the prevalence of falls at home among older adults, assess the risk of falls, and identify factors associated with falls.	Eighty-six elderly individuals participated, mostly female, with a mean age of 81.96 ± 6.62 years.	86.0% of the elderly reported having experienced a fall, of which the majority (52.3%) mentioned that it occurred in the last 12 months. The highest number of falls occurred on the street, in the kitchen, and on stairs, associated with age and the use of walking aids. The main reasons for falls were tripping (68.9%) and stairs (15.6%).	The authors concluded that older adults aged 65 to 80 years were more likely to experience a fall risk in the kitchen. Furthermore, areas such as hallways, living rooms, and backyards are considered high-risk locations for falls.

Source: Prepared by the authors, 2025

It is worth noting that the main objective of this study was to investigate the main causes of falls among the elderly and which population is most affected. Thus, the analysis of the studies presented in the table revealed significant convergences, especially regarding the multifactorial nature of risk factors, the prevalence of falls in home environments, and the greater susceptibility among women. Several authors have identified that falls cannot be attributed to a single factor, but rather to a combination of physical, environmental, and clinical aspects. At the same time, some methodological and focus divergences were also identified, allowing for a critical and comprehensive discussion, which will be presented below.

Studies have emphasized the multifactorial nature of the causes of falls, integrating intrinsic factors (age, comorbidities, balance deficits, frailty, sarcopenia) and extrinsic factors (physical environment, inadequate footwear, poor lighting). Gautério *et al.* (2015), Moura *et al.* (2016), and Araújo Neto *et al.* (2017) highlighted the confluence of environmental and physiological factors as central predictors. Similarly, Almeida *et al.* (2019) and Oliveira and Marinho (2018) highlighted loss of muscle tone and poor lighting as predominant causes, which is consistent with international literature (Rubenstein, 2006; Ambrose; Paul; Hausdorff, 2013), which recognizes the association between muscle deficit and increased risk of falls.

The prevalence of falls in home environments is another point of convergence. Studies such as those by Santos *et al.* (2016), Oliveira *et al.* (2021), and Vieira *et al.* (2018) pointed to the home as the predominant location for falls, mainly in areas such as bathrooms, hallways, and kitchens. This finding was corroborated by Delbaere *et al.* (2010), who highlighted the need for simple environmental interventions, such as grab bars and removal of loose rugs, as effective prevention strategies.

Regarding the prevalence of falls, Vieira *et al.* (2018) reported a rate of 28.1%, Oliveira *et al.* (2021) 63.7%, and Alves *et al.* (2017) found an incidence of 36.4%, with 45.95% occurring outside the home. This variation can be attributed to the type of sample, environment, and methodology adopted, as pointed out by Moreira *et al.* (2022), who emphasized the need for standardization of fall assessment instruments.

Furthermore, a recurring association was observed between female sex and a higher incidence of falls, as pointed out by Silva and Bopato (2017), Chagas *et al.* (2018), Oliveira and Marinho. (2018) and Gil *et al.* (2025). This information is consistent with international studies (Peel, 2011; Bergen; Stevens; Burns, 2016), which

associated osteoporosis, lower muscle mass, and greater life expectancy in women with greater vulnerability.

The consequences of falls, when reported, indicated functional impairment, fractures, and limitations in daily activities. Alves *et al.* (2017) observed that 61.54% of older adults stopped performing their activities after the event. Vieira *et al.* (2018) reported fractures in 12.1% of cases, predominantly in the lower limbs. These findings corroborate studies such as those by Bergen *et al.* (2016), which linked falls in older adults to high hospital admission costs and increased morbidity and mortality.

Despite the convergences, some divergences deserve highlighting. For example, Souza *et al.* (2017) concluded that factors such as sex, age, and medication use did not significantly influence the probability of falls, which contradicts most of the studies analyzed and highlights possible sampling or methodological limitations. In contrast, Tomaz *et al.* (2017) identified a significant association between the use of benzodiazepines and an increased risk of falls, especially in the morning. These results reflect Woolcott 's findings *et al.* (2009), who highlighted the role of psychotropic drugs as important risk factors.

Another point of divergence concerns the impact of comorbidities. While Moura *et al.* (2016), Oliveira *et al.* (2021), and Ramos *et al.* (2024) identified hypertension, diabetes, and cardiovascular diseases as important determinants, other studies, such as those by Taguchi *et al.* (2022), emphasized frailty and pre-frailty as central elements. The study by Caetano *et al. (2023) reinforced this perspective by associating a high risk of falls with cognitive impairment, sarcopenia, and frailty, in line with* Fried's observations *et al.* (2001) on frailty syndrome as a predictor of adverse events in older adults.

Furthermore, the influence of age presented nuances. Although several studies (Gautério *et al.*, 2015; Chagas *et al.*, 2018; Gil *et al.*, 2025) recognize advanced age as a risk factor, Vieira *et al.* (2018) reported a higher occurrence in older adults aged between 60 and 79 years, suggesting that behavior, lifestyle, and social support can modulate the effects of chronological age.

The discussion about falls in the elderly is not limited to identifying risk factors, but requires an understanding of biopsychosocial contexts. As highlighted by Lord *et al.* (2007), effective prevention should integrate functional assessment, environmental interventions, and personalized rehabilitation. The analysis of the reviewed studies showed gaps in the implementation of preventive strategies in health institutions, as

pointed out by Ramos *et al.* (2024), which was also mentioned by Vieira *et al.* (2022), when relating the risk of falls to failures in hospital care.

Another aspect that was not addressed much in the studies analyzed was the emotional dimension of falls, although Fear of Falling (FoF) is widely recognized as a factor that perpetuates sedentary lifestyles and loss of functionality (Scheffer *et al.*, 2008). The absence of a psychological approach and consideration of the impact of falls on the autonomy of older adults represented a significant limitation of the national literature.

The study by Taguchi *et al.* (2022) presented an important perspective by associating Frailty Syndrome with the risk of falls, showing that the greater the degree of frailty, the higher the prevalence of self-reported falls. This association was consistent with studies such as those by Fried *et al.* (2001) and Clegg *et al.* (2013), who described frailty as a precursor to adverse events such as falls, hospitalizations, and premature death in older adults, reinforcing the importance of the aforementioned care.

4. FINAL CONSIDERATIONS

A review of the studies revealed a predominance of multifactorial causes of falls in the elderly, with emphasis on environmental, clinical, and demographic factors. Advanced age, female sex, the presence of comorbidities, the use of certain medications, and Frailty Syndrome appeared recurrently in the literature as determining factors. Despite some methodological and sampling divergences, the scientific evidence pointed to the importance of integrated prevention strategies, centered on environmental restructuring, clinical monitoring, and health education.

Despite the relevant findings, this study presented some limitations that should be considered. It was a literature review based on a specific time frame, covering only the period from 2015 to 2025. Furthermore, the selection of studies was limited to three databases and to the Portuguese and English languages, which may have restricted access to relevant publications in other languages or outside the databases used. These limitations indicate the need for caution in generalizing the results. For future research, it is recommended to extend the analysis period, include other databases, and consider studies in other languages in order to provide a more comprehensive view of the phenomenon.

Furthermore, longitudinal studies with a mixed-methods approach can contribute to a better understanding of risk factors and prevention strategies. The results presented can support public health policies, as well as community and individual interventions aimed at preventing falls in older adults.

REFERENCES

ALMEIDA, M. A. et al. Causas e consequências de quedas de idosos atendidos em hospital público. **Revista Interdisciplinar**, Teresina, v. 12, n. 1, p. 15-22, 2019. Disponível em: https://revistainterdisciplinar.uninovafapi.edu.br/revinter/article/view/1201. Acesso em 23 de abr. 2025.

ALVES, J. R. et al. Avaliação dos fatores de risco que contribuem para a queda em idosos. **Revista Brasileira de Geriatria e Gerontologia**, Rio de Janeiro, v. 20, n. 2, p. 59-69, 2017. Disponível em: https://www.scielo.br/j/rbgg/a/DchbQKyWZdjJDjxPcbMTdkJ/?lang=en. Acesso em 23 de mar. 2025.

AMBROSE, A. F.; PAUL, G.; HAUSDORFF, J. M. Risk factors for falls among older adults: a review of the literature. **Maturitas**, v. 75, n. 1, p. 51-61, 2013. Disponível em: https://pubmed.ncbi.nlm.nih.gov/23523272/. Acesso em 23 de abr. 2025.

AMBROSE, A. F. et al. Falls and fractures in the elderly: a review. **Clinics in Geriatric Medicine**, v. 39, n. 1, p. 1-12, 2023. Disponível em: https://www.sciencedirect.com/science/article/abs/pii/S0378512213000546. Acesso em 23 de abr. 2025.

ARAÚJO NETO, A. H. et al. Falls in institutionalized older adults: risks, consequences and antecedents. **Revista Brasileira de Enfermagem**, v. 70, n. 4, p. 719–725, 2017. http://dx.doi.org/10.1590/0034-7167-2017-0107. Acesso em 23 de abr. 2025.

BERGEN, G.; STEVENS, M. R.; BURNS, E. R. Falls and fall injuries among adults aged ≥65 years — United States, 2014. **MMWR** – Morbidity and Mortality Weekly Report, v. 65, n. 37, p. 993-998, 2016. Disponível em: http://dx.doi.org/10.15585/mmwr.mm6537a2. Acesso em 23 de abr. 2025.

BRASIL. **Lei nº 14.423, de 22 de julho de 2022**. Altera a Lei nº 10.741, de 1º de outubro de 2003, para substituir, em toda a Lei, as expressões “idoso” e “idosos” pelas expressões “pessoa idosa” e “pessoas idosas”, respectivamente. Diário Oficial da União, Brasília, DF, 25 jul. 2022. Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2019-2022/2022/lei/l14423.htm. Acesso em 23 de abr. 2025.

CAETANO, L. C. et al. Risco de queda e sua associação com variáveis demográficas, clínicas, estado cognitivo, risco de sarcopenia e fragilidade. **Revista Brasileira de Geriatria e Gerontologia**, Rio de Janeiro, v. 26, n. 1, e230008, 2023. Disponível em:

https://www.scielo.br/j/rbgg/a/wtyVN3gkdQ7qG8Fjvs6GW7k/?format=pdf&lang=pt. Acesso em 23 de abr. 2025.

CHAGAS, N. R. et al. Relação entre o equilíbrio corporal e o risco de quedas em idosos de um projeto social de Fortaleza-CE. **RBPFEX** - Revista Brasileira de Prescrição e Fisiologia do Exercício, v. 12, n. 76, p. 547-555, 11 ago. 2018. Disponível em: https://www.rbpfex.com.br/index.php/rbpfex/article/view/1455. Acesso em 23 de abr. 2025.

CLEGG, A. et al. Frailty in elderly people. **The Lancet**, v. 381, n. 9868, p. 752-762, 2013. Disponível em: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)62167-9/abstract. Acesso em 23 de jun. 2025.

DELBAERE, K. et al. Risk factors for falls in community-dwelling older people: a systematic review and meta-analysis. **Age and Ageing**, v. 39, n. 1, p. 1-10, 2010. Disponível em: https://pubmed.ncbi.nlm.nih.gov/20585256/ . Acesso em 20 de jun. 2025.

FRIED, L. P. et al. Frailty in older adults: evidence for a phenotype. **The Journals of Gerontology Series A: Biological Sciences and Medical Sciences**, v. 56, n. 3, p. M146-M157, 2001. Disponível em https://doi.org/10.1093/gerona/56.3.M146. Acesso em 10 de fev. 2025.

FERREIRA, B. H.; et al. Análise da capacidade funcional e sua associação com características sociodemográficas, doenças e hábitos de mulheres residentes em periferia. **SciELO Preprints**, 2022. Disponível em: https://preprints.scielo.org/index.php/scielo/preprint/view/4385 . Acesso em 12 de mai. 2025.

GAUTÉRIO, D. P. et al. Risk Factors for new accidental falls in elderly patients at Traumatology Ambulatory Center. **Investigación y Educación em Efermería**, v. 33, n. 1, p. 35-43, 2015. Disponível em: http://www.scielo.org.co/scielo.php?pid=S0120-53072015000100005&script=sci_arttext&tlng=pt. Acesso em 23 de abr. 2025.

GIL, R., et al. Risco de queda no domicílio em idosos -avaliação numa comunidade. **Millenium** - Journal of Education, Technologies, and Health, n. 17e, e39129, 2025. Disponível em: https://revistas.rcaap.pt/millenium/article/view/39129 . Acesso em 23 de abr. 2025.

LORD, S. R. et al. **Falls in older people:** risk factors and strategies for prevention. 2. ed. Cambridge: Cambridge University Press, 2007. Disponível em: https://doi.org/10.1017/9781108594455. Acesso em 23 de abr. 2025.

LIMA, J. et al. Custos das autorizações de internação hospitalar por quedas de idosos no Sistema Único de Saúde, Brasil, 2000-2020: um estudo descritivo. **Epidemiologia e Serviços de Saúde, Brasília,** v. 31, n. 1, e2021603, 2022. Disponível em: https://www.scielo.br/j/ress/a/6Lmf64R4QFSVPLFy8gMJXNq/abstract/?lang=pt . Acesso em 23 de abr. 2025.

MOURA, J. M. et al. Fatores associados à queda de idosos que podem resultar em fratura de fêmur. **Revista de Enfermagem UFPE Online,** Recife, v. 10, n. 2, p. 720–

726, 2016**.** Disponível em: https://periodicos.ufpe.br/revistas/index.php/revistaenfermagem/article/view/11012. Acesso em 23 de abr. 2025.

OLIVEIRA, S. M.; MARINHO, R. C. N. Estudo sobre prevalência de quedas em idosos. **Revista Humanidades & Inovação**, Palmas, v. 5, n. 2, p. 282-290, 2018. Disponível em: https://revista.unitins.br/index.php/humanidadeseinovacao/article/view/510. Acesso em 23 de abr. 2025.

OLIVEIRA, S. R. et al. Fatores associados a quedas em idosos: inquérito domiciliar. **Revista Brasileira em Promoção da Saúde**, Fortaleza, v. 34, e210013, 2021. Disponível em: https://www.proquest.com/openview/9ccccc9a8c2f67234e5d28d85ccc7609/1. Acesso em 23 de abr. 2025.

ORGANIZAÇÃO MUNDIAL DA SAÚDE. **World report on ageing and health**. Genebra: OMS, 2023. Disponível em: https://www.who.int/publications/i/item/9789241565042/.Acesso em 23 de abr. 2025.

PEEL, N. M. Epidemiology of falls in older age. **Canadian Journal on Aging**, v. 30, n. 1, p. 7-19, 2011. Disponível em: https://www.cambridge.org/core/journals/canadian-journal-on-aging-la-revue-canadienne-du-vieillissement/article/abs/epidemiology-of-falls-in-older-age/BCC8159201AFCC20CC31ED12B030B630. Acesso em 23 de abr. 2025.

RAMOS, J. R. et al. Risco de quedas em idosos internados em hospital universitário. **Revista Brasileira de Promoção da Saúde**, Fortaleza, v. 37, e37004, 2024. Disponível em: https://ojs.unifor.br/RBPS/article/view/14679 . Acesso em 23 de abr. 2025.

ROTHER, E. T. Revisão sistemática x revisão narrativa. **Acta Paulista de Enfermagem**, São Paulo, v. 20, n. 2, p. v-vi, 2007. Disponível em: https://doi.org/10.1590/S0103-21002007000200001. Acesso em 23 de abr. 2025.

RUBENSTEIN, L. Z. Falls in older people: epidemiology, risk factors and strategies for prevention. **Age and Ageing**, v. 35, supl. 2, p. ii37-ii41, 2006. Disponível em https://doi.org/10.1093/ageing/afl084. Acesso em 23 de abr. 2025.

SANTOS, A. M. et al. Acidentes domésticos em idosos atendidos em hospital de urgência. **Revista Eletrônica de Enfermagem**, Goiânia, v. 18, e1169, 2016. Disponível em: https://revistas.ufg.br/fen/article/view/36569 . Acesso em 23 de abr. 2025.

SCHEFFER, A. C. et al. Fear of falling: measurement strategy, prevalence, risk factors and consequences among older persons. **Age and Ageing**, v. 37, n. 1, p. 19-24, 2008. Disponível em: https://doi.org/10.1093/ageing/afm169 Acesso em 23 de abr. 2025.

SOARES, C. R.; OKUNO, M. F. P. Impacto da polifarmácia e o uso de medicamentos associados ao risco de quedas em idosos. **SciELO Preprints**, 2024.

Disponível em: https://preprints.scielo.org/index.php/scielo/preprint/view/7840 . Acesso em 23 de abr. 2025.

SILVA, A. et al. Tendências temporais de morbidades, fatores de risco e de proteção para doenças crônicas não transmissíveis em pessoas idosas residentes nas capitais brasileiras. **Revista Brasileira de Epidemiologia**. v. 26, supl. 1, e230009, 2023. Disponível em: https://www.scielosp.org/article/rbepid/2023.v26suppl1/e230009/pt/ . Acesso em 23 de abr. 2025.

PEREIRA, C. S. et al. O impacto dos aspectos cognitivos na funcionalidade de idosos de um munícipio do interior paulista. **SciELO Preprints**, 2025. Disponível em: https://preprints.scielo.org/index.php/scielo/preprint/view/11262. Acesso em 23 de abr. 2025.

SILVA, J. M.; BOLPATO, M. B. Principais causas de quedas em idosos e atuação da enfermagem nas orientações preventivas. **Journal of Health and Nursing Practice**, Cáceres, v. 2, n. 2, p. 418-429, 2017. Disponível em: https://periodicos.unemat.br/index.php/jhnpeps/article/view/2278. Acesso em 23 de abr. 2025.

SOUZA, L. R. et al. Quedas em idosos e fatores de risco associados. **Revista de Atenção à Saúde**, São Caetano do Sul, v. 15, n. 54, p. 55-60, 2017. Disponível em: https://seer.uscs.edu.br/index.php/revista_ciencias_saude/article/view/4804 . Acesso em 23 de abr. 2025.

TAGUCHI, C. K. et al. Síndrome da Fragilidade e riscos para quedas em idosos da comunidade. **CoDAS**, São Paulo, v. 34, n. 56, e20210025, 2022. Disponível em: https://www.scielo.br/j/codas/a/FVtDTT3y7YzpHChk7Hq7m7f/ . Acesso em 23 de abr. 2025.

TOMAZ, A. F. et al. Prevalência de quedas em idosos devido ao uso de benzodiazepínicos e diuréticos. **Revista Uningá**, Rio de Janeiro, v. 52, n. 1, p. 34-39, 2017. Disponível em: https://revista.uninga.br/uninga/article/view/1386. Acesso em 23 de jun. 2025.

UNITED NATIONS. **World Population Prospects 2022**. New York: Department of Economic and Social Affairs, Population Division. New York: United Nations, 2022. Disponível em: https://www.un.org/development/desa/pd/content/World-Population-Prospects-2022. Acesso em 23 de abr. 2025.

VIEIRA, L. S. et al. Quedas em idosos no Sul do Brasil: prevalência e determinantes. **Revista de Saúde Pública**, São Paulo, v. 52, n. 22, p. 1-13, 2018. Disponível em: https://www.scielosp.org/article/rsp/2018.v52/22/ .Acesso em 23 de abr. 2025.

VIEIRA, C. P. et al. Fatores associados ao risco de quedas em idosos hospitalizados. **Revista Enfermagem Atual In Derme**, Teresina, v. 96, n. 38, e021258, 2022. Disponível em: https://www.revistaenfermagematual.com.br/index.php/revista/article/view/1370 . Acesso em 23 de abr. 2025.

WOOLCOTT, J. C. et al. Meta-analysis of the impact of 9 medication classes on falls in elderly persons. **Archives of Internal Medicine**, v. 169, n. 21, p. 1952-1960, 2009. Disponível em: https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/485251. Acesso em 23 de abr. 2025.