

RISK FACTORS FOR FALLS IN THE ELDERLY IN A DAY CARE CENTER

Susana Dias

Nurse at the Confraternity of São Vicente de Paulo (Residential Structure for Elderly People in Lisbon), student of the master's degree in community health nursing, at the Lisbon School of Nursing

Isabel Gonçalves

Nurse specialist in community nursing, in charge of the Conde Saúde Family Health Unit, Setúbal

Laura Viegas

Adjunct professor at the Lisbon School of Nursing, PhD in Nursing

<https://orcid.org/0000-0003-1411-7245>

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Abstract: Falls are a recurring problem in the elderly, with physical and psychological consequences for the elderly, the family and society. **Goals:** 1-identify risk factors for the occurrence of falls in the elderly; 2-evaluate practices and behaviors to prevent falls in the elderly who attend a day care center. **Method:** analytical cross-sectional observational study, carried out in a day care center in the metropolitan region of Lisbon to answer the question: What are the risk factors, practices and behaviors of the elderly living in the community to prevent falls? Approval by the Ethics Committee. Sample consisting of 13 elderly people who attend day care. A questionnaire was applied with: 1) sociodemographic characteristics, 2) degree of dependence in activities of daily living (Barthel Index), cognitive status (Mini Mental State Examination), 3) risk factors, 4) Morse Falls Scale and 5) Scale of practices and behaviors of the elderly in the prevention of falls. **Results:** The elderly have a mean age of 80.92 years (SD= 6.96), are male (53.8%), with 4 years of schooling (84.6%), are widowed (69.2%) and live alone (61.5%). All have deficits in balance, have pathologies at the level of the cardiovascular system (92.3%) and musculoskeletal (69.2%), with moderate dependence with the same percentage (38.5% respectively), none of them have cognitive deficits. They have low risk and high risk of falling with the same percentage (38.5% respectively), independent. In communication practices and behaviors, 46.2% reported that doctors and nurses never warn them about the risk of falling. In Safety Practices and Behaviors, 38.5% do not check if the bathroom floor is slippery before using it. However, they have safety practices in the management of the surrounding space [(choice of the best preventive measures (53.8%), organization of the room space for travel (84.6%) and removal of obstacles from the bedroom and hallway

(69.2%)] to prevent falls. **Conclusions:** The study revealed several risk factors for the occurrence of falls in the elderly (advanced age, sensory deficit, balance deficit, pathology and medication). In practices and behaviors for communication, there is a deficit on the part of health professionals to inform about the risk of falling, while in the practices of safety behaviors of the elderly, there is a deficit in the prior observation of the state of the floor in safety practices in the space where move. The data underscore the importance of a multiprofessional, community-based intervention to train the elderly in behaviors that prevent the risk of falling.

Keywords: Accidental falls; aging, risk, day care, nursing.

INTRODUCTION

Considering the report Step safely: strategies for preventing and managing falls across the life-course [2], an elderly person is any person over 60 years of age, and until then and since 2005, the definition of an elderly person starts at 65 years of age, in developed countries, and at age 60 in developing countries. This definition of the concept of elderly has a focus on chronology and not on biological characteristics [3]. In Portugal, most institutions continue to use the age of 65 to delimit the beginning of the elderly.

Aging causes biological changes with repercussions on the musculoskeletal, neurological and sensory systems, which potentiates the occurrence of falls [4]. This phenomenon occurs practically all over the world, and Portugal is no exception, representing the population over 65 years old, 21% of the national population [5]. In the last fifty years, the aging rate in Portugal went from 32.85% in 1970 to 165.1% in 2020 [6].

Falls are one of the main events that occur most in the elderly, so their prevention is essential. The main inherent risk behaviors

are the lack of physical activity and sedentary lifestyle, having been enhanced since 2020, due to the SARS-CoV-2 pandemic. The Public Health indications to contain the mitigation of Covid-19, went through the confinements, that is, people were restricted from leaving the house, except for some exceptions. Thus, the length of stay at home has increased for everyone, including the elderly. [7, 8]

In 2019 and 2020, 43,198 visits to the emergency services (SU) for Domestic and Leisure Accidents (ADL) were recorded, in individuals aged 65 to 74 years, and 77,652 in individuals over 75 years of age. This results, respectively, in 35.7% and 64.3% of visits to the ED by ADL. Both in Portugal and in other countries, the number of ADL at home has increased since April 2020, corresponding to 73.2% of them. Regarding the place of occurrences by ADL, in 2019, 68.2% were at home and, in 2020, 73.2%. As for the injury mechanism of these ADL, 88.8% resulted from falls in 2019, and 89.4% in 2020. [8]

The number of deaths due to accidental falls in 2019 was 876 deaths. [9]

The fall causes physical injuries that can lead to functional disability, contributing to the dependence of the elderly, which may require their institutionalization [4]. However, the consequences go beyond physical conditions, since the psychological impact and, eventually, the loss of quality of life associated with limitations compromise active aging [10].

There are several risk factors that cause the occurrence of falls, namely age, female gender, certain medication, pathologies, among others [4]. Changes in balance and the musculoskeletal system also increase the risk of falling [4]. Although the literature presents the risk factors inherent to falls, it does not address the practices and behaviors of the elderly in order to prevent the occurrence of falls [10].

In the literature, a gap was identified in the prevention of falls, more specifically in the preventive behaviors of the elderly with regard to falls, and to train these elderly people, it is important to talk about Health Literacy, which is consequently related to the concept of Health Promotion, making it therefore imperative to address Nola Pender's Health Promotion Model (2011).

The author defined Health Promotion as behavior motivated by the desire for well-being, however, in the specific case of the community, this concept is achieved by multiple actions that improve family conditions and community life. [11]

According to the DGS, citing the WHO, health literacy is defined "as the set of (...) cognitive and social skills and the person's ability to access, understand and use information in order to promote and maintain a good health" [12] (p. 6). So, implies the knowledge, motivation and skills of people to access, understand, evaluate and apply health information in order to form judgments and make decisions in everyday life about health care, disease prevention and health promotion, maintaining or improving their health. quality of life throughout the life cycle [12] (p. 6).

Health literacy levels in Portugal are below the European average, so it is essential to develop these skills in the Portuguese. The most vulnerable groups have the highest percentage of "problematic" or "inadequate" literacy levels, at 60%. This group includes individuals over 65 years of age, with a low level of education, low income, with chronic pathologies, among others. [12]

The theme of the prevention of falls is interconnected with the general objectives 1 and 3 of the Action Plan for Health Literacy, which correspond respectively to "Adopt healthy lifestyles" and "Promote well-being", since whose priority area is active and healthy

aging and well-being. [12]

As for the National Health Plan: Revision and Extension 2020, the prevention of falls is linked to the strategic axis of “Citizenship in Health”, which proposes “the promotion of a culture of citizenship that aims to promote literacy and the training of citizens, so that they become more autonomous and responsible in relation to their health and the health of those who depend on them” [13] (p. 14), as well as, “carrying out literacy promotion actions that focus on promotion measures health, disease prevention, namely (...) [in] risk factors” [13] (p. 14). The National Health Plan 2021-2030 is closely linked to the Sustainable Development Goals (SDGs), in particular “SDG 3: Ensure access to quality health and promote well-being for all, in all areas”. ages” [14]. With regard to the topic under study, in the PNS 2021-2030 [14], we can find a mention of drops in the indicators for the general assessment of the progress of the aforementioned SDGs. Falls account for 7.1% of the cause of death by Disability Adjusted Life Years (DALYs), which correspond to “years of healthy life lost due to premature death” [14] (p. 76), between 2009-2019, increasing the its level from the 17th to the 13th. Regarding the analysis of the burden of disease and disability, the Years Lived with Disability (YLDs), the falls correspond to 3% of YLDs, representing the 12th in the 2019 ranking table [14].

In 1978, according to the Declaration of Alma-Ata, resulting from the first International Conference on Primary Health Care (CSP), it describes that they must take into account the health problems of the community, implementing strategies in the scope of promotion, prevention, among others [15]. Eight years later, in Ottawa, the concept of Health Promotion is defined as “the process that aims to increase the capacity of individuals and communities to control their health, in order to improve it”

[16] (p. 1).). The concept has evolved over time, going from a goal to a facilitator of the process of achieving objectives, allying itself with other definitions such as Health Literacy, Health Prevention and Protection, as well as being articulated with socioeconomic and environmental determinants [17].

The concepts of Health Promotion and Health Literacy depend on each other, since promotion aims to reduce inequalities in access to health care, and community empowerment allows to achieve this objective and control the determinants that influence the same [16].

The National Patient Safety Plan (PNSD) 2021-2026, based on five pillars, each with its own strategic objectives, reveals in “Pilar 5: Safe practices in safe environments”, that conditions must exist for the provision of care health care is carried out with quality and safety. Therefore, they determined two strategic objectives regarding the implementation and consolidation of safe practices in the care delivery environment, and the monitoring of this implementation. In correlation with the theme of falls, the following goals were defined for 2026: “90% of health care providers use control and monitoring tools for safe practice related to (...) occurrences of falls” [18] (p. 102); and, “90% of health institutions with defined strategies for the implementation of safe practices in the following areas: (...) falls” [18] (p. 102). This theme addressed in the PNSD 2021-2026 was inspired by a report published by the World Health Organization in 2021, whose theme is “Step safely: strategies for preventing and managing falls across the life-course”, focusing on the prevention of falls in all the ages [2].

According to a study called “Multidimensional Risk of Falls in the Elderly” [4], the evaluation of the practices and behaviors of the elderly in the prevention of falls was an opportunity for development,

since there is no safety culture in the prevention of falls. among them.

Nurses play a key role in ensuring that the elderly population has an active aging process of excellence, and this concept is defined according to the National Strategy for Active and Healthy Aging (ENEAS) 2017-2025, as the process of optimizing opportunities for health, participation and security, for improving the quality of life as people age, as well as the process of developing and maintaining functional capacity, which contributes to the well-being of older people, functional capacity being the result of the interaction of the person's intrinsic capacities (physical and mental) with the environment. [19] (p. 6)

Therefore, it is pertinent to invest in the prevention of falls in the elderly, since this problem is part of Public Health, so a community intervention project was prepared. The present study refers to data from the diagnosis phase of the health situation of the elderly who attend a day center. Thus, the following question arose: What is the risk, the respective factors and the practices and behaviors of the elderly who live in a community context to prevent falls?

In order to answer this question, the following objectives were outlined: 1- identify the risk factors for the occurrence of falls in the elderly who live in a community context; 2- evaluate practices and behaviors to prevent falls.

MATERIALS AND METHODS

TYPE OF STUDY

Analytical cross-sectional observational study

INTERVENTION SITE

The chosen intervention site was a Day Center of an institution in the Lisbon metropolitan area, which has different social responses throughout the individual's life

cycle.

SAMPLE SELECTION

Non-probabilistic, intentional sample of subjects who attend this social response, who made themselves available and gave their informed consent to participate in the collection of information, as well as responded to the data collection instrument.

For sample selection, the following inclusion criteria were defined: individuals over 65 years of age; individuals who attend the Day Center; and, individuals who agree to participate in the study. As exclusion criteria were defined: individuals who attend other responses from the institution; individuals under 65 years of age; individuals not present in the allotted period.

The sample is 13 elderly people who attend the day center.

DATA COLLECTION INSTRUMENT

The data collection instrument is hetero-completion through interviews. The hetero-completion is due to the uniformity of the filling in as there is a need for the researcher to complete certain scales, namely the Morse Falls Scale and the Mini Mental State Examination (MMSE).

This consists of five parts. Part I is structured according to sociodemographic characteristics and risk factors for the occurrence of falls. The remaining parts correspond to the scales: (1) Part II - MMSE; (2) Part III - Morse Falls Scale; (3) Part IV - Barthel Index; and (4) Part 5 - Scale of Practices and Behaviors of Seniors to Prevent Falls in the Community (Communication Practices and Behaviors and Safety Practices and Behaviors). The scales mentioned above were validated for the Portuguese language and culture. The risk factors were evaluated with questions related to those found in the researched literature (sensory deficit, balance

deficit, pathologies, medication consumption, physical exercise/sedentary lifestyle).

Data collection took place between June 6-21, 2022

ETHICAL PROCEDURES

Informed consent was requested prior to the interview, in order to guarantee the anonymity and confidentiality of the data provided. Participants were informed that they may refuse to participate or interrupt the study at any time, without prejudice. The informed consent was signed by the same or by their representatives, in the case of fine motricity alteration, visual alterations or other duly justified situations.

As for the Scale of Practices and Behaviors of the Elderly to Prevent Falls in the Community, authorization was requested and granted to author Cristina Baixinho. Authorization to carry out this project was also requested from the institutions involved, which authorized it. Finally, the Ethics Committee for Health of the Regional Health Administration of Lisbon and Vale do Tejo issued favorable opinion n° 040/CES/INV/2022.

STATISTICAL TREATMENT

Data processing was done using descriptive statistics: mean, standard deviation, maximum and minimum limits (in the case of quantitative variables) and percentages (in the case of qualitative variables), using the SPSS Statistic software (version 28.0.0.0).

RESULTS

- The sociodemographic characteristics reveal that the elderly have a mean age of 80.92 years [SD= 6.96 and threshold (68-92 years)] and 69.3% are over 80 years of age. Most are men (53.8%), widowed (69.2%), with 4 years of schooling (84.69%) and living alone (61.5%).

- in terms of dependence on Basic Daily Living activities evaluated by the Barthel scale, 38.5% are independent and an equal percentage have moderate dependence, 23.1% have mild dependence. None have altered cognitive status (assessed by the MMSE).
- regarding the risk of falling, it was found that the elderly presented an equal percentage for low and high risk of falling (38.5%) assessed by the Morse Falls Scale.
- Regarding the risk factors for falls, most have a sensory deficit (69.2% visual and 76.9% hearing); 100% responded that they have a balance deficit; the majority have health problems (92.3% in the cardiovascular system and 69.2% in the musculoskeletal system), most consume medication (61.5% antidepressants, 61.5% antihypertensives and 69.2% other medications for cardiovascular problems) and the majority practice physical exercise (61.5%). The frequency of physical exercise is the same for those who practice once or more than three times a week (23.1% respectively).
- The assessment of communication practices and behaviors and safety practices and behaviors is represented in table 1.

DISCUSSION

I did not study, we will identify risk factors to happen so we will be left confused.

In sociodemographic characteristics, we found age and sex as risk factors [4]. Being two-old or reaching a mean of 80.92 years, reveals that we are facing a group of meio-ids [20] and the high percentage (69.3%) with people older than 80 years is in agreement with another study [21]. Most of the two

	Communication practices and behaviors	<p>“ I listen and talk to other elderly people about risk factors for falls.”: 38.5% never did; 46.2% only did it sometimes.</p> <p>“Doctors warn me about the risk of falling.”: 46.2% say they never do.</p> <p>“Nurses warn me about the risk of falling.”: 46.2% say they never do.</p> <p>“Family members warn me about the risk of falling.”: 38.5% say always; 53.8% refer sometimes.</p> <p>“I inform my family about the risk factors for falling.”: 23.1% always mention it; 53.8% refer sometimes.</p> <p>“I communicate the identified risk factors to the nurses.”: 69.2% reported that they never</p> <p>.</p>
Scale of Practices and Behaviors of the Elderly in the Prevention of Falls	Security Practices and Behaviors	<p>“I select the right shoes for my foot.”: 92.3% always select.</p> <p>“I choose to wear shoes with non-slip soles.”: 92.3% always select.</p> <p>“When I get up from bed, I first sit with my feet flat on the floor and only then do I stand up.”: 15.4% mention that they make sure sometimes; 7.7% say they never certify</p> <p>.</p> <p>“ I make sure my feet are well supported on the floor before standing up.”: 30.8% mention that sometimes; 7.7% say they never do it.</p> <p>“I check that the bathroom floor is not slippery/wet before using it.”: 38.5% never check it; 15.4% only check sometimes.</p> <p>“Before taking care of hygiene, I make sure that the floor is not slippery.”: 38.5% never check it; 7.7% only check sometimes.</p> <p>“I try to be persevering in choosing the best measures to prevent falls.”: 53.8% say it is always.</p> <p>“I organize the space in my room to make it easier to move around.”: 84.6% say they always have it.</p> <p>“I remove obstacles that make it difficult to walk in the bedroom.”: 69.2% always remove them.</p> <p>“I remove obstacles that make it difficult to walk in the hallway.”: 69.2% always remove them.</p>

Table 1- results of the scale of practices and behaviors of the elderly in the prevention of falls (practices and communication behaviors and safety practices and behaviors). Lisbon: 2022

elderly are male, contrary to the literature that refers to the female sex as a factor of risk [4].

Aligned with another study [4], other risk factors such as: o sensory deficit was high (69.2% visual and 76.9% auditory) and reached a maximum value without balance deficit [100%]; health problems (92.3% at the cardiovascular system level and 69.2% not at the musculoskeletal system), or drug use. In fact, aging is associated with a decline in functional capacity to the extent that aging is inseparable from two damages that chronic disease causes throughout life [22] and increased longevity leads to an increase in the incidence of diseases directly linked to it [23], being the consumption of medications a non-idose natural process, due to the presence, more frequently, of multimorbidities [24]. The study [25] concluded that it is more frequent in patients (81.3%) who take medications chronically. Considering dependency in ADLs integrated into biophysiological risk factors, the elderly reported independence in life activities (38.5%) that associated with light dependency (23.1%) were opposite to the results of the study carried out with the elderly living in the community (home) whose result was moderate or severe dependency in 48.3% [4]. The sedentary lifestyle referred to as a risk factor [7,8] was not predominant in this group of elderly, verifying the practice of physical exercise (61.5%), and it could be a protective factor to reduce the risk of staying in this group of idosos. However, this study was not verified, relatively to risk factors, or the same as the study carried out [4] for the existence of factors in various dimensions.

In relation to the curfew cliff, the value is the same for low and high curfew cliffs (38.5%). This study was not carried out with elderly hospitalized in a cardiology service, with recourse to the Morse curfew scale [25], the elderly forams assessed before the curfew, not day or day after the curfew, whose risk in

all the assessments was high.

Regarding the practices and behaviors of two people in the prevention of falls, in the dimension related to the practices and behaviors of communication, we refer that doctors and nurses with the same percentage (46.2%) never alert you to the risk of falling. A percentage was significant, and lower than that of a study using the same scale [4], whose percentage was much higher for doctors (96.8%) but lower for nurses (25.8%).

In terms of security practices and behaviors, 38.5% of the two did not verify that the floor of the bathroom is chosen before or used as the study above referred to as a percentage that was almost impossible (71%). In this dimension, the results of the security practices are in favor of the management of the surrounding space in which they live to avoid the occurrence of stays (53% of the elderly always try to be persevering in the choice of the best preventive measures, 84% organize the space of their room of way to facilitate displacement of the same, 69.2% always remove obstacles that hinder walking in the room and in the corridor). In the same dimension, the results of the study in comparison [4] will reveal that while people seek preventive measures, only 6.5% organize their room space to facilitate displacement and not remove obstacles that make it difficult to walk in the room and in the corridor.

The consequences of being blind are apart from physical ailments, given that the psychological impact and eventual loss of quality of life associated with functional capacity limitation compromises active aging [10] and can trigger the institutionalization of blindness [4]. Because of the joint intervention of two health and social service professionals in the prevention of the occurrence of stays in our day center, or which can provide a social response by providing a set of services that contribute to the maintenance of the elderly

in their social and family, is a resource for this (day center), to meet its objectives that is to contribute to delay or avoid the maximum or internment of people in institutions and promote strategies for the development of self-esteem, autonomy, functionality and personal independence e social doidoso [26].

CONCLUSION

Foram identified factors of risk of occurrence das leftovers from the study. Together, additional information was obtained on the results of the Scale of practices and behaviors of the elderly in the prevention of falls, namely in the communication in which a percentage of elderly people who did not receive information from the doctor or from the nurse about the risks of falling and who In the practices and behaviors of safety, the elderly do not observe in advance the state of

the apartment (molhado / escorregadio) but rather seek preventive measures for curfews, we organize the space of their room for their displacement and remove obstacles that hinder walking in the room and not runner. Although the data will be related to a small sample, and we will find some promising data about the study's adults, we will adopt preventive measures for falls, these results are a micro-portrait of what the scientific evidence tells us. Likewise, it obligatorily leads to the involvement of various resources at the level of health and two social services, namely the planning of a community intervention to train the elderly in the prevention of the occurrence of stay. Likewise, it is up to the nurse to partner with other health professionals, involving the elderly and the family, to promote health literacy and training for the elderly to avoid the occurrence of falls, contributing to active aging.

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