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# WHAT ARE THE PRACTICES OF CAREGIVERS TO PREVENT FALLS AMONG INSTITUTIONALIZED ELDERLY?

## QUAIS AS PRÁTICAS DOS CUIDADORES PARA PREVENIR AS QUEDAS NOS IDOSOS INSTITUCIONALIZADOS?

## ¿CUÁLES SON LAS PRÁCTICAS DE LOS CUIDADORES PARA PREVENIR CAÍDAS ENTRE ANCIANOS INSTITUCIONALIZADOS?

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**Objective:** to describe the practices of caregivers in managing the risk of falls of institutionalized elders, relating these practices with age, education, and the time the caregivers have been exercising this profession. **Method:** correlational and quantitative study. The population included the professionals from six long-permanence health institutions for Portuguese elders. The Scale of Intervention Practices to Prevent Falls in Institutionalized Elders was used. **Results:** the 53 indicators have shown that the practices are generally good. The use of physical measures to restrict mobility as prevention, however, is worrying. There was no statistically significant difference between the number of years of professional activity, the age of the caregivers, their education, and their actions with regard of falls among elders. **Conclusion:** the practices adopted are positive, but they are not always maintained and are not associated to the variables being studied.

**Descriptors:** Accidental Falls. Aged. Homes for the Aged. Institutionalization. Caregivers.

*Objetivo: descrever as práticas dos cuidadores na gestão do risco de queda de idosos institucionalizados e relacionar as práticas com a idade, formação e tempo de exercício profissional dos cuidadores. Método: estudo correlacional, de abordagem quantitativa. A população foram os profissionais de seis instituições de longa permanência para idosos portugueses. Utilizou-se a Escala de Práticas de Intervenção para Prevenção de Quedas de Idosos Institucionalizados. Resultados: Os 53 indicadores demonstram que as práticas são globalmente boas, entretanto é preocupante a utilização de medidas de restrição física da mobilidade, como medida preventiva. Verificou-se não haver diferença estatisticamente significativa entre o número de anos de atividade profissional, a idade das cuidadoras, a formação e as suas práticas no âmbito das quedas dos idosos. Conclusão: as práticas adotadas são positivas, mas nem sempre são mantidas, não estão associadas às variáveis em estudo.*

*Descritores: Acidentes por quedas. Idoso. Instituição de Longa Permanência para Idosos. Institucionalização. Cuidadores.*

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*Objetivo: describir las prácticas de cuidadores en la gestión del riesgo de caída de ancianos institucionalizados y relacionar sus prácticas con la edad, la formación y el tiempo desde que los cuidadores ejercen esa profesión. Método: estudio correlacional de abordaje cuantitativo. La población incluyó los profesionales de seis instituciones de larga permanencia para ancianos portugueses. Se utilizó la Escala de Prácticas de Intervención para la Prevención de Caídas de Ancianos Institucionalizados. Resultados: los 53 indicadores muestran que las prácticas son globalmente buenas, aunque sea preocupante el uso de medidas de restricción física de la movilidad como medidas preventivas. Se verificó que no hubo diferencia estadística significativa entre el número de años en la actividad profesional y las prácticas con respecto a las caídas de los ancianos. Conclusión: las prácticas adoptadas son positivas, pero no siempre mantenidas, y no están asociadas a las variables estudiadas.*

*Descriptores: Accidentes por Caídas. Anciano. Hogares para Ancianos. Institucionalización. Cuidadores*

## Introduction

Investigations in the field of falls in the elder population have been productive in the last few years, which enabled the description of risk factors in many different contexts, as well as preventive measures using evidences for the control of risk, of falls, of secondary lesions, and their severity.

The revision of literature makes it possible to state that there is a more expressive number of investigations about this phenomenon in elders who live in the community or in hospitals<sup>(1-3)</sup>. However, institutionalized elders are three times more likely to suffer falls than those who live at home<sup>(1)</sup>, and for them, the consequences of these accidents are more damaging, frequently leading to functional decline, disability<sup>(2)</sup>, dependence<sup>(3)</sup>, and diminution in the quality of life<sup>(2-3)</sup>.

The residents of homes for the aged (HFA) are heterogeneous in their diagnostic, functional status and in the underlying objective of their treatment<sup>(4)</sup>, making it more difficult for professionals to intervene by introducing preventive measures. A research reported that, among the barriers to the prevention of falls in the HFAs, there are fast changes in the functional and cognitive state of the elder, the lack of familiarity of the teams with the needs of the elders, and the organizational policies that affect caregivers<sup>(2)</sup>.

The authors identified problems in the organization of care associated to the lack of specialized units, work overload, team consistency<sup>(2)</sup>, formal training and communication between the different professionals, the elder,

and the management of the HFAs<sup>(3)</sup>. These appear to prevent the introduction of the good clinical practices recommended in the institutions, pushing the professionals, residents, and families towards making decisions that are not individualized or based on the level of risk and potential benefits<sup>(4)</sup>.

A research carried out in sixteen HFAs in the United States aimed at clarifying how the teams used the characteristics of the elders to individualize the measures to prevent falls, showing that preventive measures are likely to be introduced after the elder fell, and that, in situations in which the elder had dementia, the probability of environmental changes increased (0.3;  $p < 0.001$ , CI 95% 0.2-0.5)<sup>(5)</sup>. The results led investigators to conclude that professionals that are caregivers of institutionalized elders report a standardized approach for the prevention of falls, with no individualization<sup>(5)</sup>.

These data are worrying, since the prevention of falls should be a constant preoccupation of long-term care<sup>(6)</sup>, and the effectiveness of prevention programs depends on the performance of the teams<sup>(3,6)</sup>. Even when the evaluation of the risk of falls uses standardized instruments, the professionals can ignore these results in the making of clinical decisions related to prevention<sup>(7)</sup>, and some believe that, from the perspective of preventive care, their use is not adequate to the reality of the residents<sup>(8)</sup>. This undervaluing of the capacity of these instruments for prevention may contribute for professionals to not use them or to use them inadequately<sup>(7)</sup>.

A literature review about the instruments to evaluate the risk of falls in institutionalized elders found differences in the understanding, in the completion, and in the application of instruments<sup>(7)</sup>, which condition the interpretation of the evaluation and makes it more difficult to compare the results of different studies, as well as to extract conclusions that make it possible to extrapolate the different researches<sup>(7-8)</sup>.

On the other hand, the information on risk factors and a discussion between teams about preventive measures do not always take place, making it possible for different elements from the team to value different measures, which does not guarantee the continuity of care and the individualization of measures, considering the evaluated risk<sup>(3,5,7,9)</sup>.

The few studies that addressed the issue of caregivers and the impact of their intervention in the diminution of risk and the prevalence of this type of accident indicate that leadership, teamwork and education are the key-elements to associate the evaluation of risk and the individualization of multiple and unique preventive measures to be introduced in the contexts<sup>(3,6,9)</sup>.

Considering the above, the objective of this study is to describe the practices of caregivers in managing the risk of falls of institutionalized elders, relating these practices with age, education, and with the time the caregivers have been exercising this profession.

## Method

This is a correlational and quantitative study<sup>(10-11)</sup>, whose target population were the caregivers of institutionalized elders from six Portuguese HFAs in the regions of Lisboa and Vale do Tejo.

Considering the organizational features of the organizations which have different organic units — daily care centers, house support, and homes (long-permanence institutionalization) —, the eligibility criteria included professionals who work with institutionalized elders (formal caregivers, excluding the chief, the health

professionals and the technical direction of the institutions.

The sample was made up of 152 people, who answered a questionnaire made up of two parts: the first including data on the sociodemographic characterization of the sample, while the second was the Scale of Intervention Practices to Prevent Falls in Institutionalized Elders (EPIPQ)<sup>(12)</sup>. This scale seeks to determine the frequency with which caregivers think they performed each action for the prevention of falls in institutionalized elders (self-perception measures), through the use of a Likert scale whose response options are: never; few times; sometimes; many times; and always<sup>(12)</sup>.

The measuring instrument presents good psychometric properties in the study of validation for the Portuguese population<sup>(12)</sup>. The 53 indicators are distributed in four dimensions: Practices for the Application of Safety Measures/Guidance ( $\alpha = 0.936$ , 11 items); Practices for the Prevention of Falls During the Provision of Care to the Elder ( $\alpha = 0.942$ , 15 items); Practices for the Prevention of Fall Related to the Physical Environment ( $\alpha = 0.933$ , 18 items); and Practice for the Prevention of Falls Related to the Information and Education of the Elder ( $\alpha = 0.924$ , 9 items)<sup>(12)</sup>.

The questionnaires were distributed in the institutions and two urns were left in each, one used to collect the responses and another to collect the Free and Informed Consent Forms (FICF). They stayed there for 15 days. The questionnaires were filled in in the absence of the investigator, to avoid socially desirable answers.

The statistical treatment of the data was carried out using the Statistical Package for the Social Sciences (SPSS) software, version 23.0. Before the statistical test was applied, at the moment of relating variables, the Kolmogorov-Smirnov Test was applied to evaluate the distribution of variables<sup>(11)</sup>. Once it was found that the sample did not have a normal distribution, non-parametric techniques were used to test the relation between the variables being investigated<sup>(11)</sup>. The significance level used was  $p \leq 0.05$ <sup>(10)</sup>.

This study is a part of the project Managing the Risk of Falls in Devices for Elders, which was approved by the Ethics Commission (Ref. ICS/268/2012). All respondents gave their consent and received oral and written information about the objectives of the study. They were guaranteed free and informed participation, anonymity, and the confidentiality of the data.

## Results

The 152 caregivers in the sample were, on average,  $47 \pm 10.3$  years old and included exclusively women who had been working in the institutions for  $11.9 \pm 8.19$  years. Most of them ( $n=113$ ; 74.3%) had work experience in another HFA before starting work in the current one, 68% did not have any type of education about risk factors or preventive measures for falls, or with regard to the actions to be taken with an elder who has fallen, before starting this line of work.

The six institutions have internal education plans to complete a minimum of 20 hours of yearly education, which make it possible for most to be educated with regard to: risk factors

that contribute to increase the number of falls ( $n=98$ ; 81.7%); evaluation of the risk of falls ( $n=100$ ; 80.2%); measures to prevent against falls ( $n=101$ ; 83.5%); care for the elder who has fallen ( $n=100$ ; 82.6%); documentation of falls ( $n=74$ ; 62.2%) and other themes related to the falls ( $n=62$ ; 57.4%).

The results of the application of the EPIPQ are presented by each dimension of the scale. In the dimension of practices to apply safety measures/guidance and having the median of each indicator present(3,5), we can highlight that (in most cases) the caregivers are concerned with deciding measures to prevent against falls after the risk factors are identified ( $4.06 \pm 1.06$ ), as well as with the knowledge and use of institution resources to prevent falls. That is why most of them use resources that make it possible for the elder to remain safe ( $4.46 \pm 0.856$ ), seeking to solve the problems that put their safety at risk ( $4.38 \pm 0.9$ ) and persevering in the selection of preventive measures ( $4.33 \pm 0.846$ ), while also putting the guidance of the nurses into practice ( $4.27 \pm 1.03$ ) (Table 1).

**Table 1** – Characterization of the sample of caregiver with regard to the actions to apply safety measures/guidance. Lisbon, Portugal, 2019 (N=152)

Indicator	Mean	Standard deviation
I only decide the preventive measures to use after risk factors have been identified	4.06	1.06
I know the resources there is in the institution and that make it possible to prevent falls	4.02	1.13
I use the resources that make it possible for the elder to remain safe	4.46	.856
I use safety measures in the different situations of risk of fall	4.36	.903
I select measures to prevent against falls according to the risk factors identified	4.19	.880
I implement measures to prevent falls in day-to-day life	4.15	.981
I ponder over the techniques I use in my interventions (for example, how to raise an elder to a standing position)	4.39	.895
I try to persevere in the choice of the best measures to prevent falls	4.33	.849
I am alert to the strategies the elder has to prevent falls	4.03	1.03
I apply the guidance of nurses with regard to measures for fall prevention	4.27	1.03
I seek to solve the problems that put the safety of the elder at risk	4.38	.900
<b>Total (11-55)</b>	<b>46.64</b>	<b>10.53</b>

Source: Created by the authors.

In dimension 2, that of the practices of preventing falls while offering care to the elder, the indicators that had the lowest means are selecting the appropriate footwear ( $3.97 \pm 1.10$ ), programming regular visits to the bathroom for incontinent persons ( $4.00 \pm 1.03$ ) and wearing them with closed shoes, with slip-resistant soles ( $4.02 \pm 1.04$ ).

Considering the global evaluation of the results, there is a clear preoccupation about aiding the elder who has difficulties in gait to walk to the bathroom ( $4.57 \pm 0.82$ ), about aiding elders with balance alterations to put/remove their clothes ( $4.55 \pm 0.82$ ), and about placing bars around the beds of confused elders ( $4.56 \pm 0.933$ ) (Table 2).

It stands out that, from a maximum total of 60 practices, the sample, on average, states to very frequently take actions and have behaviors to prevent falls during the care to the elders.

This dimension is made up by two factors, one which is related to the processes of the musculoskeletal system, both in the promotion of mobility and in its restriction, and another which is related to dressing and footwear. It should be highlighted that, although caregivers "often" pay attention to the selection of safe clothing and adequate footwear and choose closed footwear with slip-resistant soles, they, in general, value, above these practices, the actions and behaviors related to musculoskeletal system processes.

**Table 2** – Characterization of the sample of caregivers with regard to the practices of fall prevention during the provision of elder care. Lisbon, Portugal, 2019 (N=152)

Indicator	Mean	Standard deviation
When I raise the elder, before putting them in a standing position, I sit them on the bed for a few seconds, with their feet supported by the floor	4.49	.88
I certify that the feet of the elder are supported by the floor before putting them in a standing position	4.50	.86
I sit the elders with balance alterations in couches/chairs with armrests for support	4.43	.83
I program regular visits to the bathroom for incontinent elders	4.00	1.03
I program regular visits to the bathroom for elders with difficulties in gait	4.09	.96
I aid the elder with difficulties in the gait to go to the bathroom	4.57	.82
I keep the urinal/bedpan accessible to the elder during the night	4.14	1.07
I put bars in the beds of the elders who are confused/agitated	4.56	.93
I use contention belts (in the waist) for confused/agitated elders when they are seated	4.54	.81
I aid the elder who has balance alterations in walking and dressing/removing clothes	4.55	.82
I keep technical help (walking frame, crutch, cane) within the reach of the elder	4.40	.96
When the elder asks for help to carry out an activity, I do it promptly	4.37	.89
I choose adequate footwear for the elder	3.97	1.10
I choose safe clothing	4.17	.99
I choose to shoes with slip-resistant soles for the elder to wear	4.02	1.043
<b>Total</b>	<b>64.8</b>	<b>14.06</b>
Factor 1-PB related to processes of the musculoskeletal system (12-60)	52.64	10.91
Factor 2 - PB related to dressing and footwear (3-15)	12.16	3.15

Source: Created by the authors.

Subtitle: PB = Practices and Behaviors

The third dimension of EPIPQ is about the prevention of falls associated to the physical environment. It is made up of three factors (the maintenance of the space and equipment in safe conditions; accessibility of spaces and materials; maintenance of operational lighting and signaling devices). The global result is that these practices are followed in most cases (Table 3).

The following practices stood out as the most relevant: guaranteeing that the areas of circulation

are well-lighted ( $4.54 \pm 0.83$ ), keep areas for circulation free from obstruction ( $4.52 \pm 0.835$ ), keep the wheels of the bed ( $4.46 \pm 0.95$ ) and of the chair ( $4.46 \pm 0.84$ ) locked.

The items with the lowest mean were: checking that the light in the bathroom stays on during the night ( $4.08 \pm 1.17$ ) and guaranteeing, during the night, that the sensor of the light switch in the room can be reached by the elder ( $4.17 \pm 1.13$ ).

**Table 3** – Characterization of the sample of caregivers with regard to the practices of fall prevention which are related to the physical environment. Lisboa, Portugal, 2019 (N=152)

Number and content of the items	Mean	Standard deviation
I adapt the space of the room of the elders to make their mobility easier	4.19	1.00
I remove obstacles that hinder in-room gait	4.40	.85
I readjust the height of the bed during the night, so that it is lower	3.83	1.22
I keep the wheels of the bed locked	4.46	.95
I keep the chair wheels locked whenever the chair is stopped	4.46	.84
I often check whether the floor of the bathroom is not slippery/wet in my turn	4.30	.93
Before I carry out hygiene care, I verify that the floor is not slippery	4.37	.93
Before the elder goes to the bathroom, I check if the floor is dry	4.37	.95
I keep the lateral support bars of the bathroom in the right position to be used	4.34	1.02
I keep personal objects in reach of the elder	4.20	.95
I keep the bedside table in reach of the elder	4.21	1.06
I check whether the material is in safe conditions	4.41	.84
I put the clothes the elders will wear in a place that is easy for them to get	4.28	.94
I keep circulation areas unobstructed	4.52	.83
I make sure that circulation areas are well-lit	4.54	.83
I check that the light in the bathroom stays on during the night	4.08	1.17
I check, during the night, that the bell is in reach of the elder	4.42	.93
I check, during the night, that the sensor of the light switch in the room is in reach of the elder	4.17	1.13
<b>Total (18-90)</b>	<b>77.55</b>	<b>17.45</b>
Factor 1 - space and equipment maintenance in safe conditions (8-40)	34.38	7.71
Factor 2 - accessibility of space and materials (7-35)	30.5	6.50
Factor 3 - lighting and signaling (3-15)	12.67	3.24

Source: Created by the authors.

In the last dimension of the scale, related to the practices of fall prevention as related to the information and education of the elder (Table 4), the indicators with lower means are related to the information given to the elder about their risk

factors ( $4.31 \pm 0.956$ ) and guidance about how to raise from bed ( $4.29 \pm 0.987$ ). The indicator with the highest mean is the information about the use of the bell ( $4.48 \pm 0.884$ ).



**Table 4** – Characterization of the sample of caregiver with regard to the practices of information and education of the elder with regard to the prevention of falls. Lisboa, Portugal, 2019 (N=152)

Number and content of the items	Mean	Standard deviation
I try to warn the elder about the risk of falls	4.31	.956
I explain to the elder the risk factors for falls	4.30	.90
I inform the elders that are under the risk of falls about preventive measures that are adequate to their situation	4.16	1.00
I encourage the elder to take safe behaviors	4.41	.88
I explain the elder how to raise from the bed	4.29	.98
I encourage the elder to walk	4.36	.87
I encourage the elder to use the support bars on the sides of corridors/stairs	4.39	.88
I inform the elder about the use of the bell	4.48	.88
I inform the elder about the use of the light sensor	4.30	1.07
<b>Total (9-45)</b>	<b>39</b>	<b>8.45</b>

Source: Created by the authors.

There was no statistically significant difference between the number of years of professional activity, the age of the caregivers, and their practices in the scope of falls among elders (total of the scale in each dimension) ( $p>0.05$ ).

The study explored the hypotheses that those who were educated before and/or during the professional activity presented more adequate practices than those who had no education. To do so, the statistical test Mann-Whitney's U was used. The analysis of the results showed that the caregivers who received education presented good prevention practices and behaviors more often than those who did not. However, these differences were not statistically significant.

## Discussion

In the global analysis of the 53 indicators evaluated with the sample, with the exception of "I choose adequate footwear for the elder" and "I readjust the height of the bed during the night, so that it is lower", all the others scored, on average, above four, showing that, in most cases, the practices to manage the risk of falls are maintained. This result implies that the preventive measures are not always chosen due to the risk factors for falls(2,4-7).

This is a reality in the HFAs; even those that use instruments to evaluate the risk of falls do not translate the results found in terms of a global score and of the determination of specific risks

to the elder in their clinical decision making. That devalues the real potential of the different evaluation instruments of the risk of falls (scales, functional evaluation tests, scales of mental health evaluation)<sup>(7)</sup>. Therefore, the elders that are under the risk of falling are found but their discovery is not followed by individualized measures to keep them safe<sup>(13)</sup>, there being a undervaluing of risk(7,14-15).

It does not make sense to evaluate the risk without examining the determinants of falls, upon which the actions of the professionals should act, thus controlling or eliminating them, and contributing for the diminution of the prevalence(7,15). A change in the paradigm is urgent, appropriating the results of the evaluation to offer individualized prevention, integrating the strategies the elder use to keep safe, and which are not always the most appropriate. The fear of falling, which functions as both cause and consequence(4,13-14), is a good illustration of how complex this issue is. However, for an intervention to be possible, the fear must be evaluated, as well as its influence in the daily life of the elder and of the HFA itself.

In the dimension of practices to apply safety measures/guidance, it has been found that professionals who care for elders not always follow the guidance of health professionals about which preventive measures should be implemented. This piece of data corroborates the results of other studies, which found it



necessary to improve the communication between the different professionals and between these professionals and the elders and their families<sup>(3,9)</sup>.

The nature of the indicators of this dimension corroborates the international recommendations about the importance of there being a leader for fall prevention, responsible to educate the team and motivate them, to maintain, constantly and through time, individualized preventive measures<sup>(9)</sup>, and to train the multidisciplinary team to improve the evaluation and the communication of episodes of falls<sup>(16-17)</sup>. The severity of falls in the institutionalized elderly population implies in a clear change in the models of organization and of health care provision<sup>(9)</sup>, with anticipatory actions rather than reactive ones<sup>(18)</sup>. When there is a fall in the institutions, the elders worry; even those who did not fall, but witnessed the fall, may become fearful and, consequently, limit their own movement and activity, leading to a diminution in their balance and mobility, which predisposes them to a fall<sup>(14,19)</sup>. In the concrete case of falls, literature suggests that preventive measures are implemented in an ad hoc and reactive manner<sup>(15)</sup>, especially after the elder already fell (5,7,13), and there is no capacity to foresee and control the problem in its genesis.

The second dimension of the EPIPQ makes it possible to evaluate the practices of fall prevention during the provision of care to the elder. The first factor related to the processes of the musculoskeletal system has indicators related to the promotion of mobility, but also to its restriction, focusing the discussion on "I put bars in the beds of the elders who are confused/agitated" ( $4.56 \pm .93$ ) and on "I use contention belts (in the waist) for confused/agitated elders when they are seated" ( $4.54 \pm .81$ ), considering how these measures may translate with regard to the autonomy and independence of the residents.

In the HFAs it is common to physically restrict mobility as a preventive measures, especially in people with a high potential for falls<sup>(20)</sup>. This practice can lead to limitations in self-care, has negative impacts in physical capacity, in mental health, in socialization and in quality of life, subsequently leading to a diminished

functionality and increasing the risk of falls, in addition to impacting in the costs and in the organization of health systems and services<sup>(21)</sup>. Future studies should explore this triad: fall, fear, and mobility physical restrictions and their impacts in the increased dependence of institutionalized elders.

Still with regard to this second dimension, preoccupations that stand out are the selecting of safe clothing ( $4.17 \pm .999$ ), of close shoes with slip resistant soles ( $4.02 \pm 1.043$ ), and of shoes that are adequate for the elder ( $3.97 \pm 1.108$ ). Few studies have associated behavioral risks and, very concretely, the choice of the shoe and of clothing to the fall, which makes it difficult to understand their role in the increase of risks, in the prevalence and in the mechanism of falls. Some authors report the inadequate use of shoes as a risk for accidents<sup>(14)</sup>, but the results of a systematic literature review on the use of different types of footwear and their relations with the falls of healthy elders was inconclusive, warning that its evidence was too limited to point out the use of the shoes as a strategy to prevent falls<sup>(22)</sup>.

Investigations in the HFAs should analyze the behavioral risk factors in depth, namely those associated to self-care, which can affect the practices of fall prevention during the provision of care to the elder.

The third dimension of EPIPQ measures the practices of fall prevention related to the physical environment and the three factors that make it up (the maintenance of the space and equipment in safe conditions; accessibility of spaces and materials; maintenance of operational lighting and signaling devices). There are good practices, but they are not always followed. This study did not explore whether there are differences between the institutions at this level, provoked by their architectural structure, the quality of their accessibility, and the availability of materials and equipment to give support to the daily life activities of the more dependent elders.

Long-term care institutions for elders are recognized as very different with regard to the conception of their physical structure and the organization of their space, and it must

be considered that this is a great challenge for the investigation<sup>(15)</sup>. Environmental risk factors, similarly to behavioral ones, have not been adequately explored in the HFAs, as opposed to what has been happening in the community, where research results show that interventions that change the environment of the elder are effective in the reduction of risk, of the prevalence of falls, and of secondary lesions relative to this accident in nearly 30%<sup>(23)</sup>, in addition to being cost-effective<sup>(24)</sup>.

Although in Portugal the legislation is very clear and encompassing with regard to accessibility, lifts, the placing of support products that promote mobility and self-care, such as ramps, side bars in bathrooms, among others, little is known about the use of the space by elders and their caretakers. The existence of laws is not enough. It is necessary to guarantee that HFAs treat as a priority the entire process of maintaining the physical environment accessible and safe and of maintaining the equipment and many support products in adequate conditions for use, which implies in defining circuits and interventions, from the acquisition to the use, going through the maintenance and its regular verification<sup>(9)</sup>.

It should be added that this responsibility in the management of the physical environment is not exclusive of professionals and of the direction of the institutions. The elders themselves must be educated to adopt a set of behaviors in the organization of their room and in the use of their "goods", to guarantee the safety of all. For instance, falling after tripping in the walking aids of other elders is a frequent cause of falls during the gait<sup>(9)</sup>, which warns about the need to intervene in this level.

The last dimension of the scale about the practices of fall prevention is related to the information and to the education of the elder, it can be noted that the teams worry about the communication of risk factors, and about reinforcing it to maintain it safe. It is a consensus that investing in the education of professionals must include the development of intra-team communication abilities, especially to help the elders in expressing their preoccupation related to the fall<sup>(3)</sup>.

The information, education and instruction of the elder have to be maintained during the entire

institutionalization period<sup>(3)</sup>, to guarantee that the appropriate and specific interventions are developed to diminish the incidence of falls<sup>(5)</sup>. This cannot be considered as a minor intervention because improving the communication inside the team may contribute to reduce in 12% the number of cases of falls<sup>(5)</sup>, demanding the involvement of multiprofessional teams in all levels of attention (3,9,17,24), aiming to detect all elders who are under the risk of falling or have a history of falling<sup>(24)</sup>.

The lack of permanence of these practices may be explained by the lack of education and training, the difficulties in managing time due to the low numbers of caregivers with regard to the number of elders who require care, and by the confusion in defining the roles and who has a responsibility is responsible for<sup>(16)</sup> risk evaluation and for determining which preventive measures should be implemented<sup>(17)</sup>. In addition, the way in which the care is provided and the practices of caregivers and elders introduce other risk variables that have not been yet controlled or studied.

This discussion is concluded with the conviction that betting on the education of teams in the institutions for elders can be a cost-effective measure that translates into the diminution of risk the risk and prevalence of falls, of fear and of the severity of lesions, positively affecting the practices of caregivers. That is why a structured education is recommended(3,9,17,25), guided towards the specific needs of each context, avoiding standardizations, and with mutual support, all guaranteed by a member of team who is responsible for doing so<sup>(17)</sup>, motivating caregivers to evaluate risk and intervention throughout the time of institutionalization and guaranteeing it continues being done.

The limitations of this study are related to the intentional choice of institutions and of the sample, which does not allow for a generalization of the results. The instruments were collected fifteen days after distribution, making it possible for the potential respondents to talk among themselves, which could lead to socially desirable responses. However, this study is innovative as it explores the practices in the management of the risk of falls by HFA care.

## Conclusion

The practices of formal caregivers of HFAs in managing the risk of falls of institutionalized elders, in the domains of the application of safety measures/guidance, in the prevention of falls during the provision of care, of practices related to the physical environment and of the practice of information and formation of the elder which were adopted were found to be positive and continuous in most cases. The use of measures to physically restrict mobility stands out as worrying, since the participants in the sample use them as preventive measures, although they have negative results in the evolution of the functionality of institutionalized elders.

It stands out that nurses, as leaders in the management of the risk of falls, must educate, train, and monitor the caregivers in the care for the prevention against risks of falls in institutionalized elders.

Future studies should associate the practices of risk fall management in HFAs with the prevalence of these accidents, to better understand the repercussion of the behavioral and environmental risks over the degree of risk, the prevalence, the fear, the severity of the lesions and the satisfaction of the team, as well as that of the elder.

## Collaborations:

1 – conception, project, analysis, and data interpretation: Cristina Lavareda Baixinho and Maria dos Anjos Dixe;

2 – writing and relevant critical review of the intellectual content: Cristina Lavareda Baixinho and Maria dos Anjos Dixe;

3 – final approval of the version to be published: Cristina Lavareda Baixinho and Maria dos Anjos Dixe.

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