DOI: https//doi.org/10.13037/ras.vol20n72.8642

Original Article

Recebido em: 26/07/2022 | Aceito em: 17/10/2022

Study of the prevalence of intrinsic and extrinsic factors of fall risk in the elderly in primary care

Estudo da prevalência dos fatores intrínsecos e extrínsecos de risco de queda em idosos na atenção primária

Victor Rangel Pinheiro Neiva[1]
Orcid: https://orcid.org/0000-0002-9528-6106

Raquel Loiola Gomes Moreira[2]
Orcid: https://orcid.org/0000-0002-5114-7112

Resumo

No Brasil, entre 2000 e 2010, as internações hospitalares por causas externas, financiadas pelo Sistema Único de Saúde (SUS), apresentaram um aumento de 19,1%, tendo como principais causas as quedas, especialmente entre a população idosa, representando um problema de saúde pública em ascensão. **Objetivo:** Averiguar a prevalência de determinados fatores de risco de quedas em idosos da comunidade acolhidos na APS e sua associação com o alto risco intrínseco. **Métodos:** Estudo observacional, transversal realizado com idosos atendidos na UBS Dr. Milton Lopes, Imperatriz/MA. A coleta de dados foi instrumental, utilizando-se a Escala de Downton modificada, associada a um instrumento semiestruturado, analisando aspectos como perfil sociodemográfico e elementos considerados fatores de risco para a ocorrência de quedas, além das consequências desse agravo. As variáveis foram associadas pelo teste qui-quadrado de Pearson ou pelo teste exato de Fischer e os valores com $p<0,05$ foram considerados estatisticamente significativos. **Resultados:** Foram entrevistados 182 idosos, com média de idade igual a 72,1 anos, predominando o sexo feminino (62,1%). Houve grande número de relatos de quedas anteriores (48,4%), uso de medicamentos (74,7%) e de déficits sensoriais (81,9%) nessa população. Foi constatada uma prevalência de alto risco intrínseco para quedas em 53,85% da amostra. Dentre os que já caíram, uma boa parcela sofreu lesões de pele (25%) e/ou fraturas (20,4%). **Conclusões:** Sugere-se a assistência integral e prioritária pelos serviços de saúde pública, visando a identificação de populações com risco aumentado e o pronto estabelecimento de estratégias preventivas nesse âmbito.
Palavras-chave: idoso; fatores de risco; prevalência

Abstract

In Brazil, between 2000 and 2010, hospital admissions due to external causes, financed by the *Sistema Único de Sáude* (SUS), showed an increase of 19.1%, with falls as the main causes, especially among the elderly population, representing a problem public health on the rise. **Objective**: To investigate the prevalence of certain risk factors for falls in community-dwelling elderly people in PHC and their association with high intrinsic risk. **Methods**: Observational, cross-sectional study carried out with elderly people treated at the UBS Dr. Milton Lopes, Imperatriz/MA. Data collection was instrumental, using the modified Downton Scale, associated with a semi-structured instrument, analyzing aspects such as sociodemographic profile and elements considered risk factors for the occurrence of falls, in addition to the consequences of this grievance. The variables were associated using Pearson's chi-square test or Fisher's exact test, and values with $p<0.05$ were considered statistically significant. **Results**: A total of 182 elderly people were interviewed, with a mean age of 72.1 years, predominantly female (62.1%). There were a large number of reports of previous falls (48.4%), medication use (74.7%) and sensory deficits (81.9%) in this population. A prevalence of high intrinsic risk for falls was found in 53.85% of the sample. Among those who have already fallen, a good portion suffered skin injuries (25%) and/or fractures (20.4%). **Conclusion**: Comprehensive and priority assistance by public health services is suggested, aiming at the identification of populations at increased risk and the prompt establishment of preventive strategies in this area.
Keywords: aged; risk factors; prevalence

[1] Universidade Federal do Maranhão - Campus Imperatriz, MA – Brasil. E-mail: victorpinheiro60@gmail.com
[2] Universidade Federal do Maranhão - Campus Imperatriz, MA – Brasil. E-mail: Orcid: raquelloiola@yahoo.com.br

Introduction

Population aging is a worldwide phenomenon. The Brazilian population aged 60 years and over already exceeds 30 million, according to Pesquisa Nacional por Amostra de Domicílios Contínua – Características dos Moradores e Domicílios, published by IBGE in 2017. This profile change brings with it challenges involving social systems, such as health and social securityl [1,2,3].

In Brazil, the years between 2000 and 2010 saw a rise in hospital admissions due to external causes, financed by Public Health System (SUS), of 19.1%, having as the main cause falls, especially among the elderly population, representing a public health problem on the rise. It is estimated that more than a third of people aged 65 and over have a fall each year and, in many cases, this is recurrent [4]. Regarding mortality, data reveal that in 2013, 8.775 patients over 60 years of age died from this cause in the country [5].

A fall can be defined as an event described by the victim or a witness, in which the person inadvertently lands on the ground or other location at a lower level than previously occupied, with or without loss of consciousness or injury [6]. The occurrence of falls among the elderly can be related to single and clearly identifiable causes or, more commonly, multiple and difficult to individualize ones. Stable intrinsic factors that increase the risk of falls are represented by chronic diseases and/or age-related changes [7].

Among the main changes in the aging process, those that provide greater instability stand out, such as joint deformity, decreased strength and muscle mass (sarcopenia) [8]. Even proprioceptive, tactile, visual and aural information, which integrate peripheral information for the maintenance of balance, are diminished with natural aging [4,9]. There is also evidence of a decrease in reflexes, automated rhythmic movements and voluntary movements, in addition to impaired nutritional status (lack of appetite, sensory disturbances of smell and taste, xerostomia) and age-related vitamin deficit.

Some specific diseases can be potential causes of falls, such as epilepsy, Parkinson's disease, myopathies and peripheral neuropathies, cardiogenic syncope, cardiac arrhythmias, cervical spondylosis, dementias, autonomic dysfunction and postural hypotension, and renal dysfunction. Furthermore, any acute illness can cause a transient decline in cerebral perfusion, increasing the chances of loss of consciousness and falls among the older population nonspecifically [7].

The consumption of medication by the elderly is possibly associated with a higher risk of falls due to a greater sensitivity to side effects of drugs in this population, due to metabolic changes resulting from normal aging. Specific classes related to increased risk include psychotropic substances, cardiovascular substances, corticosteroids, non-steroidal anti-inflammatory drugs (NSAIDs) and neuroleptics. Elderly people with specific diseases are more likely to use more than four prescribed medications (polypharmacy), including many of these classes in daily consumption. The implications of the influence of medications on falls are often not recognized by patients, family members, or professionals, especially when polypharmacy is very complex [10].

Furthermore, there are extrinsic factors that disturb balance, including environmental and behavioral risks in daily activities, sometimes in circumstances where sensory stimulation is reduced, such as in low-light or excessive brightness environments, or when postural stability becomes impaired, due to lack of support in certain places or the presence of slippery floors and carpets, especially in elderly people with a high degree of exposure to risk [11]. Intrinsic and/or extrinsic factors initiate the event of the fall and cause it to

have significant consequences on the physical and psychological health of these patients, even affecting the lives of family members and caregivers [5].

The investigation of aspects related to the scope of falls can provide information about their eventual causes and clues to important risk factors [12]. During the approach to the elderly, information about their clinical history, environmental conditions and behavioral habits should be collected and recorded, helping to structure individualized preventive measures, in order to reduce the incidence and morbidity and mortality of this condition [11,13].

In this context, the objective of this study was to investigate the prevalence of certain risk factors for falls in community-dwelling elderly people in Primary Health Care, as well as to identify factors associated with high intrinsic risk in these patients.

Materials and Methods

This is a cross-sectional, observational study, with a quantitative approach of the descriptive and analytical type, carried out with elderly people treated at the Basic Health Unit (BHU) Dr. Milton Lopes, located in Imperatriz, Maranhão, being one of the regional references for the care of the population, which has a multiprofessional team composed of doctors, nurses, nursing assistants and technicians, nutritionists, dentists, among other professionals.

The study population consisted of the sample taken from the elderly group registered in Estratégia Saúde da Família - Rodoviária sector, comprising about 400 patients. Thus, the sample calculation according to Barbetta was Applied with a 5% margin of error. The sample size calculated was 200 elderly people. Were included in the study patients aged 60 years or over treated at the UBS, with hearing and understanding and excluded those who did not meet the inclusion criteria, refused or withdrew from participating in the research.

Data were collected between October 2019 and March 2020, when the world pandemic of the new coronavirus (Sars-Cov-2) was declared, a virus that causes Covid-19 disease, highly contagious. This event made it impossible to get in touch with some elderly people, since this population is considered a risk group for the disease. With that said and when applied the exclusion criteria, 182 individuals were eligible for the study.

Data collection was instrumental, using the Downton Scale (1993) modified, associated with a semi-structured instrument prepared from research literature, containing information about the elderly and factors related to the scenario of falls. The Downton Scale measures the risk of falling according to five items and their sub-items of which a total score greater than 2 determines a high risk of falling. The participants were guaranteed an anonymous and voluntary contribution, being required to sign prior to the Free and Informed Consent Term (FICT).

The questionnaire was completed by the author himself through interviews with the elderly, approached during their stay at the unit or during a home visit accompanied by the responsible community health agent.

The variables analyzed by the instrument were about personal information about the patient (age, sex, marital status); the occurrence of previous single or multiple falls; the use of medications (sedatives/hypnotics, antihypertensives, antiparkinsonians, antidepressants, hypoglycemic agents, others); presence or absence of sensory deficits (visual, auditory, of extremities); mental state (oriented, confused); ambulation (normal, safe with assistance, insecure with or without help, impossible). In addition to addressing the environmental conditions of the home (difference in height of sidewalks, slippery or carpeted floors, low lighting or glare excessive, presence of stairs, handrails in corridors/bathrooms); and the possible health consequences due to the fall (skin injuries, fracture, immobilization, others).

Data were tabulated in an electronic spreadsheet of the Microsoft Excel® package, later treated by descriptive and inferential statistics through the statistical program Statistical Package for the Social Sciences – (SPSS) version 20. Exploratory analysis was perfomed and included the mean, standard deviation, relative frequency, absolute frequency and bar graphs, using Pearson's chi-square association tests or exact test of Fischer. The choice of one test over the other was determined by the attendance of the statistical assumption of no more than 20% of expected frequencies less than 5, using Fisher's exact test in case this assumption was violated. The confidence level adopted was 95% and values with $p<0.05$ were considered significant.

The study did not receive funding from institutions or third parties and has no conflict of interests. The norms of Resolution 466/12 of the National Health Council were followed, relating to research in human beings, having been submitted to Plataforma Brasil, with number of opinion 3.658.381 of the Ethics and Research Committee. An authorization form was sent to the coordination of the research site, requesting permission for its development. Only researchers have access to data, in order to maintain confidentiality on patient identification.

Results

Sample was composed of 182 elderly people registered in a Basic Health Unit in the interior of the state of Maranhão. Table 1 describes the sociodemographic data of the research participants, in addition to establishing a correlation with the high intrinsic risk of fall (score above 2 on the Downton Scale).

This group exhibited an average age of 72.1 ± 8.5 years, ranging from 60 to 96 years, approximately half comprised the age group between 60 and 69 years (n=82; 45.1%). Most of the sample were female, 62.1% (n=113), and the study showed an association of this variable with the high risk of falling (n=68; 60.2%; p=0.028). As for marital status, most patients were married or in a stable relationship (n=102; 56%).

Table 1. Sociodemographic characteristics and the risk of falls according to the Downton scale in the elderly of Imperatriz – MA in 2019-2020.

	High intrinsic risk of fall (Downton Scale)						
	Yes		**No**		**Total**		**p-value***
	n	**%**	**n**	**%**	**n**	**%**	
Sex							**0,028**
Female	68	60,2	45	39,8	113	62,1	
Male	30	43,5	39	56,5	69	37,9	
Age group							0,211
60-69	40	48,8	42	51,2	82	45,1	
70-79	37	63,8	21	36,2	58	31,9	
80-89	18	47,4	20	52,6	38	20,9	
90-96	3	75,0	1	25,0	4	2,2	
Marital status							0,393
Single	11	45,8	13	54,2	24	13,2	
Married/Stable union	52	51,0	50	49,0	102	56,0	
Divorced/Separate	6	54,5	5	45,5	11	6,0	
Widower	29	64,4	16	35,6	45	24,7	

*Chi-square Test.

Table 2 lists the items that compose the Downton Scale with high risk intrinsic fall. Regarding the history of falls, a total of 88 elderly people (48.4%) reported at least one previous episode, having great statistical relevance when associated with high risk of fall (n=64; 72.7%; p<0.001). A significant portion of the sample (n=136; 74.7%) makes use of some medication continuously, associated with the risk of falling (n=90; 66.2%; p<0.001) highly significant from a statistical point of view. This profile was observed with the use of antihypertensive drugs (p<0.001), hypoglycemic drugs (p<0.001) and other medications (p=0.023). No patient reported consumption of antiparkinsonian drugs.

Table 2. Downton scale and the intrinsic risk of falling in the elderly of Imperatriz – MA in 2019-2020.

	High intrinsic risk of fall (Downton Scale)						
	Yes		**No**		**Total**		**p-value***
	n	**%**	**n**	**%**	**N**	**%**	
Previous falls							**<0,001**
Yes	64	72,7	24	27,3	88	48,4	
No	34	36,2	60	63,8	94	51,6	
Medication use							**<0,001**
Yes	90	66,2	46	33,8	136	74,7	
No	8	17,4	38	82,6	46	25,3	
Sedatives							0,625†
Sim	3	75,0	1	25,0	4	2,2	
Não	95	53,4	83	46,6	178	97,8	
Antihypertensives							**<0,001**
Yes	75	73,5	27	26,5	102	56,0	
No	23	28,7	57	71,3	80	44,0	
Antidepressants							0,538†
Yes	1	100,0	0	0,0	1	,5	
No	97	53,6	84	46,4	181	99,5	
Hypoglycemic agents							**<0,001**
Yes	32	84,2	6	15,8	38	20,9	
No	66	45,8	78	54,2	144	79,1	
Others							**0,023**
Yes	32	68,1	15	31,9	47	25,8	
No	66	48,9	69	51,1	135	74,2	
Sensory deficits							**<0,001**
Yes	96	64,4	53	35,6	149	81,9	
No	2	6,1	31	93,9	33	18,1	
Visual changes							**<0,001**
Yes	79	62,7	47	37,3	126	69,2	
No	19	33,9	37	66,1	56	30,8	
Auditory changes							**<0,001**
Yes	19	90,5	2	9,5	21	11,5	
No	79	49,1	82	50,9	161	88,5	
Extremities changes							**<0,001**
Yes	42	82,4	9	17,6	51	28,0	
No	56	42,7	75	57,3	131	72,0	
Mental state (oriented)							0,251
Yes	95	53,1	84	46,9	179	98,4	
No	3	100,0	0	0,0	3	1,6	
Normal ambulation							**0,044**

Yes	83	51,2	79	48,8	162	89,0	
No	15	75,0	5	25,0	20	11,0	
Safe with assistance							**0,013**
Yes	14	82,4	3	17,6	17	9,3	
No	84	50,9	81	49,1	165	90,7	
Impossible							0,596
Yes	1	33,3	2	66,7	3	1,6	
No	97	54,2	82	45,8	179	98,4	

*Chi-square Test; †Fisher's exact test.

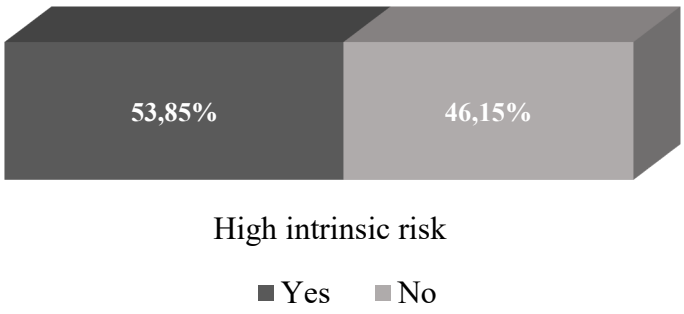
The analysis of sensory deficits indicated that 149 elderly (81.9%) had some deficit. Of these, 96 (64.6%) were classified as having a high risk of falling (p<0.001). 69.2% of elderly (n=126) presented visual alterations and of these, 79 (62.7%) were at high risk (p<0.001). Furthermore, among the elderly with hearing disorders (n=21; 11.5%), 19 (90.5%) included in the fall risk group (p<0.001). Finally, 51 patients (28%) reported changes of extremities, comprising 42 (82.4%) with high intrinsic risk (p<0.001).

Almost all of the elderly (n=179; 98.4%) were oriented at the time of the interview, showing no significant statistical association.

As for the characterization of ambulation, 162 (89%) walked normally. Of the 20 elderly (11%) with difficulty walking, 15 of them (75%) belong to the risk group fall (p=0.044). They walked safely, but with the help of some person or object, 17 respondents, with 14 (82.4%) at high risk (p=0.013), while 3 were bedridden, unable to walk. No patient walked unsafely, with help or not.

The reading of the Downton Scale indicates a high risk of falling in case of a score greater than or equal to 3. About 53.85% of the sample (n=98) were at high intrinsic fall risk, as shown in Graph 1.

Graph 1. Prevalence of high risk of falling among the elderly of Imperatriz - MA in 2019-2020.



The evaluation of extrinsic factors listed in Table 3, related to the environment in that the elderly person is included, revealed a high prevalence of respondents (n=110; 60.4%) who felt harmed by the difference in the height of the sidewalks. No elderly person reported the presence of handrails in the corridors and/or bathrooms of their home. As for the consequences of the fall in the health process of individuals who have fallen at least once (n=88), 22 (25%) reported skin lesions, while 18

(20.4%) suffered fractures. By associating these factors with high intrinsic risk, no statistically relevant values were obtained.

Table 3. Extrinsic risk factors and consequences of previous falls and the risk of falls by the Downton scale in the elderly of Imperatriz – MA in 2019-2020.

	High intrinsic risk of fall (Downton Scale)						
	Yes		No		Total		p-value*
	n	%	n	%	N	%	
Difference in height of sidewalks							0,400
Yes	62	56,4	48	43,6	110	60,4	
No	36	50,0	36	50,0	72	39,6	
Slippery or carpeted floors							0,254
Yes	19	63,3	11	36,7	30	16,5	
No	79	52,0	73	48,0	152	83,5	
Low lighting or glare excessive							0,727
Yes	5	62,5	3	37,5	8	4,4	
No	93	53,4	81	46,6	174	95,6	
Presence of stairs							0,735
Yes	4	44,4	5	55,6	9	4,9	
No	94	54,3	79	45,7	173	95,1	
Handrails in corridors/bathrooms							-
No	98	53,8	84	46,2	182	100,0	
Skin injuries							0,058
Yes	16	72,7	6	27,3	22	12,1	
No	82	51,2	78	48,8	160	87,9	
Fracture							0,099
Yes	13	72,2	5	27,8	18	9,9	
No	85	51,8	79	48,2	164	90,1	
Immobilization							0,538
Yes	1	100,0	0	0,0	1	,5	
No	97	53,6	84	46,4	181	99,5	

*Chi-square Test.

Discussion

The prevalence of falls in this study was 48.4%, a non-discriminating value from the found in some national studies about falls in the elderly in the community (33.3% and 34.8%) [15,16]. These data are similar to what Nogueira et al [4] scored, an estimate that more than a third of people aged 65 and over have a fall per year may be recurrent in many cases. The fact of having already suffered a fall, in itself, increases considerably the risk of falling again, around 60 to 70%, in the following year [11]. The fact of having already suffered a fall, in itself, increases considerably the risk of falling again, around 60 to 70%, in the following year. In relation to the intrinsic high risk profile for falls, its prevalence was 53.85%, differently from what was found in the study by Luiz and Brum (86.11%) [12], since it analyzed institutionalized elderly and octogenarians.

It was evidenced the greater risk of women suffering falls (60.2% of women), meeting data from several studies that exposed higher frequencies and chances of falls occur in females [17,18]. Thus several hypotheses are raised in order to explain this phenomenon, it is still controversial. It is assumed that women are more fragile due to the own lean mass and muscle strength, as

well as a higher prevalence of chronic diseases and medication use, greater mobility and exposure to domestic services and behaviors risk with high exposure. There was a higher proportion of elderly people who were married or in stable union regime.

The risk of falls increases with increasing age, as the literature shows. The frequencies of this event increasing according to the age group [18]. Aging provides changes in various biological systems, causing loss of balance, changes in bone and muscle mass, decline in reflexes and coordination motor deficits, sensory deficits, sedentary lifestyle, all of this favoring the occurrence of falls. In the present study, the prevalence of high risk of falling in the 60-69 age group is 48.8%; between 70 and 79 years old, 63.8%; between 80-89 years, 47.8%, probably due to the limited number of samples; and between 90-96 years is 75%.

The use of medication is an important risk factor for falls, a fact reinforced by some studies [16,18], and showed a strong association with high intrinsic risk (66.2% of the users). The physiology of the elderly undergoes changes in the absorption, metabolism and excretion of drugs, being more common in this age group, also, the concomitance of several pathologies, predisposing the patient to polypharmacy and accentuated drug interactions, increasing the occurrence of falls [19]. The increase in life expectancy, concomitant with the increase of the number of people with chronic non-communicable diseases, brings with it an expansion of medical care demand, in which medicines play an important role. This fact is worrying, considering its possible deleterious effects, especially among the elderly population. The main drugs involved with the increased risk of falls were antihypertensive drugs (56%), with high risk in 73.5% of its users. These medicines produce hypotension, bradycardia, drowsiness and fatigue. The high prevalence of consumption of hypotensive agents and their implications for the elderly patient have already been described by several studies, as that of Luiz and Brum (81%) [12]. In addition, hypoglycemic agents (20.9%) had a prevalence similar to the study by Fabricio et al. (14%) [19] and, in this study, 84.2% of its consumers comprised the high risk group for falls.

Sensory deficits are important elements in risk delineation of falls. In this study, its prevalence was high (81.9% of respondents), associated with high risk in 64.4% of those who complained of deficit. Visual changes were reported by 69.2% elderly, 62.7% of them constituting the high risk group. The presence of changes in acuity and in the visual field, as well as cataracts and glaucoma are related to the risk of falls, may compromise the ability to judge an imminent fall and take corrective action, which reinforces the study by Perracini and Ramos [17], which indicated that the decrease in visual was related to the incidence of falls. Aging also causes changes in the aural perceptive capacity, important for the displacement of the individual in the environment and compromises the components of postural, sensory, effector control and central processing, which facilitates the risk of accidents and falls [20]. This study identified 21 elderly people with hearing alterations, despite a relatively low number, 19 of these patients (90.5%) were fall into the high intrinsic risk category. This scenario is in line with what has been shown by the study of Duarte [21], which related low visual and aural acuity to the occurrence of falls in the elderly. Foot problems such as calluses, deformities, ulcers and pain when walking also contribute to the genesis of the fall, in addition to the decrease in muscle strength in the lower extremities, which

compromises mobility and activities of daily living [12,22]. During this research, about 51 elderly people (28%) complained of changes in extremities and of these, 82.4% were included in the high-risk group.

Only 20 respondents reported difficulty walking normally and 15 of these (75%) were in the high risk class for falls, with 14 performing a safe ambulation, but with assistance. This scenario is justified by the fact that the elderly with free gait or who uses a cane has a greater sense of security and freedom of locomotion, compared to the elderly who uses a walker or wheelchair, causing them to expose themselves more and fall more often [18]. Numerous studies carried out with the theme of fall, as the one by Costa et al, showed that difficulty in gait constitutes a risk factor, especially after a stroke event [22].

Regarding the extrinsic factors researched, a large number of patients (60.4%) reported having difficulties with the differences in the height of the sidewalks, a minority reported household with slippery floors or carpets (16.5%), low lighting or excessive brightness (4.4%), or presence of stairs (4.9%). None of the homes had handrails in the hallways or bathrooms. Although none of these items had a significant p-value in this study, all are highlighted as risk factors for falls in the elderly in several literatures, in addition to obstacles in the way, excessively high or low shelves and inappropriate clothes, shoes and orthotics [12,13]. The study by Fabricio et al. [19] listed causes of falls in agreement with what was discussed, highlighting the slippery floor, objects on the floor, reaching for high objects, rolling out of bed and problems with steps.

In addition, about the consequences of falls in the health process of the elderly, among the 88 patients who had fallen at least once, 22 (25%) reported skin lesions and 18 (20.4%) suffered fractures. Only one was immobilized. These data match the data disclosed by Ministry of Health [23], informing that at least one in twenty (5%) of those who have suffered a fall suffer a fracture or require hospitalization. Accidental injury is the sixth leading cause of death among elderly people aged 75 years and over and falls are responsible for 70% of this mortality, needing to be valued, since death can be one of its outcomes [19]. In addition to the consequences listed, it is worth mentioning the psychological changes suffered, such as the fear of falling again or post-fall syndrome, reported by several authors [8,15,18,24], which result in loss of independence, self-imposed functional limitation, and may develop depression, feelings of powerlessness and social isolation, culminating in the syndrome of immobility, increasing the risk of having new falls.

Thus, the compilation of data gathered in this study reinforces the need of implementation of measures aiming at reducing the risk of falls in the elderly in the community, similar to what has been systematically reviewed in the literature. For this, it is essential a multifactorial approach to the patient, which is only possible through action integrated and a qualified multiprofessional team. Efforts must be made in the scope of preventing the occurrence of falls, mainly through primary care, which has an important bond and direct contact with the elderly population. The main objective of interventions is to minimize the high morbidity and mortality rates in this group associated with falls. Falling, therefore, has to be recognized as an extremely serious problem for health services, for society and, above all, for the well-being of people who fall.

Conclusion

The main factors listed in this study with a strong association with high risk of falls in the elderly were the history of previous falls (48.4%), the use of medication (74.7%) and the presence of

sensory deficit (81.9%). The high prevalence of these conditions, in connection with the significant demographic transition experienced worldwide, reinforces the need of reorganizing and qualifying the health services and their professionals in the face of this problematic.

The screening of the risk of falling, multifactorial in the elderly population, can be performed through simple questionnaires such as the Downton scale, in addition to other instruments that address the behavioral and environmental issues in which the elderly are inserted. This investigation is necessary for fall prevention strategies to be established at the right time and to be successful, instituting standardized interventions for the multiple factors identified risk factors, addressing them with as much resolution as possible and shaping such interventions to each individual or particular situation. In this way, it becomes possible to minimize the high rates of morbidity and mortality implied in this scenario.

References

1. Agência de Notícias do IBGE [internet]. Número de idosos cresce 18% em 5 anos e ultrapassa 30 milhões em 2017 [acesso em 24 de setembro de 2019]. Disponível em: <https://agenciadenoticias.ibge.gov.br/agencia-noticias/2012-agencia-de-noticias/noticias/20980-numero-de-idosos-cresce-18-em-5-anos-e-ultrapassa-30-milhoes-em-2017>.
2. Miranda GMD, Medes ACG, Silva ALA da. O envelhecimento populacional brasileiro: desafios e consequências sociais atuais e futuras. Rev Bras Geriatr Gerontol. Junho de 2016; 19(3):507-519.
3. Rigotti JIR. Transição demográfica. Educ Real. Agosto de 2012; 37(2):467-490.
4. Nogueira LV, Silva M de O, Haagen MVD, Santos R de CCS, Rodrigues EL de S. Risco de quedas e capacidade funcional em idosos. Rev Soc Bras Clin Med. Junho de 2017; 15(2):90-93.
5. Abreu DR de OM, Novaes ES, Oliveira RR de, Mathias TA de F, Marcon SS. Internação e mortalidade por quedas em idosos no Brasil: análise de tendência. Ciênc. saúde coletiva. Abril de 2018; 23(4):1131-1141.
6. Rubenstein et al, 1990, apud Paixão Júnior e Heckman, 2006, p. 954.
7. Freitas EV de, et al. Tratado de geriatria e gerontologia. 3 ed. Rio de Janeiro: Guanabara Koogan, 2013.
8. Fhon JRS, Rodrigues RAP, Neira WF, Huayta VMR, Robazzi ML do CC. Queda e sua associação à síndrome da fragilidade no idoso: revisão sistemática com metanálise. Rev Esc Enferm USP. Dezembro de 2016; 50(6):1003-1010.
9. Freitas R de, Santos SSC, Hammerschmidt KS de A, Silva ME da, Pelzer MT. Cuidado de enfermagem para prevenção de quedas em idosos: proposta para ação. Rev bras enferm. Junho de 2011; 64(3):478-485.
10. Ramos LR, et al. Polifarmácia e polimorbidade em idosos no Brasil: um desafio em saúde pública. Rev Saude Publica. Dezembro de 2016; 50(Suppl 2):9s.
11. Buksman S, Vilela ALS, Pereira SRM, Lino VS, Santos VH. Quedas em idosos: prevenção. Sociedade Brasileira de Geriatria e Gerontologia, [s. l]. Outubro de 2008.
12. Luiz IC, Brum AKR. Intrinsic factors for the risk of fall of the elderly at home: a descriptive study. Online Braz j Nurs. Agosto de 2018; 16(4):480-485.
13. Soares AT, Cabral KN. Como abordar o idoso que cai. Sociedade Brasileira de Geriatria e Gerontologia [acesso em 12 de outubro de 2019]. Disponível em: <https://sbgg.org.br//wp-content/uploads/2014/10/abordar-idoso.pdf>.
14. Barbetta PA. Estatística aplicada às ciências sociais. Ed. UFSC; 2008.

15. Fhon JRS, Rosset I, Freitas CP, Silva AO, Santos JLF, Rodrigues RAP. Prevalência de quedas de idosos em situação de fragilidade. Rev Saúde Públ. Junho de 2013; 47(2):266-273.
16. Siqueira FV, Facchini LA, Piccini RX, Tomasi E, Thumé E, Silveira DS, et al. Prevalência de quedas em idosos e fatores associados. Rev Saúde Pública. Outubro de 2007; 41(5):749-756.
17. Perracini MR, Ramos LR. Fatores associados a quedas em uma coorte de idosos residentes na comunidade. Rev Saúde Pública. Dezembro de 2002; 36(6):709-716.
18. Ferreira DC de O, Yoshitome AP. Prevalência e características das quedas de idosos institucionalizados. Rev Bras Enferm. Dezembro de 2010; 63(6):991-997.
19. Fabrício SCC, Rodrigues RAP, Junior ML da C. Causas e consequências de quedas de idosos atendidos em hospital público. Rev Saúde Pública. Fevereiro de 2004; 38(1):93-99.
20. Lacerda CF, Silva LO e, Canto RS de T, Cheik NC. Efeitos da adaptação às próteses auditivas na qualidade de vida, no equilíbrio e no medo de queda em idosos com perda neurossensorial. Int Arch Otorhinolaryngol. Junho de 2012; 16(2):156-162.
21. Duarte, GP. Fatores intrínsecos relacionados às quedas de idosos do município de São Paulo, segundo o Estudo SABE. 2010. 64 f. [dissertação]. Ribeirão Preto: Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo.
22. Costa AG de S, Oliveira AR de S, Moreira RP, Cavalcante TF, Araujo TL de. Identificação do risco de quedas em idosos após acidente vascular encefálico. Esc Anna Nery. Dezembro de 2010; 14(4):684-689.
23. Ministério da Saúde e Instituto Nacional de Traumatologia e Ortopedia (INTO). Queda de idosos. Biblioteca Virtual em Saúde do Ministério da Saúde, 2009.
24. Pereira AMM. A queda e suas consequências para o idoso: aspectos psicológicos e emocionais. 2006. 80 f. [dissertação]. Uberlândia: Universidade Federal de Uberlândia, Programa de Pós-Graduação em Psicologia.

.

How to cite this article:

Neiva VRP, Moreira RLG. A E Study of the prevalence of intrinsic and extrinsic factors of fall risk in the elderly in primary care . Rev. Aten. Saúde. 2022; 20(72): 57-67.