Social factors that influence falls in the elderly: a narrative review

Júlia Araujo de Figueiredo^{1,2}

julia.afgd@gmail.com ORCID: 0000-0002-6665-079X

Carlos Alberto Figueiredo da Silva^{1,3}

ca.figueiredo@yahoo.com.br ORCID: 0000-0002-7429-932X

¹ Universidade Federal Rural do Rio de Janeiro, Seropédica, Rio de Janeiro, Brasil

² Universidade Salgado de Oliveira, Niterói, Rio de Janeiro, Brasil

³Universidade do Porto, Porto, Portugal

Abstract

Introduction: As falls in the elderly are a public health issue, mainly due to such severe consequences for the public studied. Several factors contribute to the accident, but this review looked only at the social factors involved. Objective: To propose a reflection on some social factors associated with the occurrence of the elderly. Methods: The study using a narrative literature review as the methodological technique. Results: From the analysis of studies, identify whether the living environment and access to health are important factors related to the fall. Besides, lifestyle also seems to be associated with an accident, emphasizing physical activity that can prevent the accident. Conclusion: Several social factors can suffer a traffic accident. Public policies on leisure activities are prohibited and adaptations to public transport and streets to prevent older adults from suffering once. Additionally, we suggest more cross-sectional or longitudinal studies relating to social inequality and the occurrence of elderly Brazilians.

Keywords: Fall, Adult older, Elderly

INTRODUCTION

The number of older adults in the world has been increasing over time. In 1980 this public corresponded to 8.5% of the population and, in 2017, 12.7% (UNFPA, 2012). The forecast is for a continuous increase for the coming years, reaching 16.4% in 2030 and 21.3% in 2050 (UN, 2017). In Brazil, the elderly number more than 23.5 million, and the trend is no different from other countries. For 2024 and 2060, projections indicate that 12.7% and 33.7% of the population will be 60 years old or older (IBGE, 2011; IBGE, 2013). Due to this population increase, researchers' attention turned to this audience and studying the well-being and quality of life of these individuals.

The quality of life of the human being is closely related to " the individual perception of their position in life in the context of the culture and value system in which they live and about their goals, expectations, standards, and concerns " (WHOQOL, 1995, p. X- + X). However, it is essential to deepen this concept in the context of the elderly population, since this is a stage of life in which these individuals usually see themselves without specific goals and perspectives (MENDES et al., 2005). Concerning this public, some aspects present in daily life are often associated with quality of life, such as pain, perceived health, financial condition, physical exercise and autonomy (Pedersen et al., 2017; Klesges et al., 2001; Muraki; Nagao; Ishikawa, 2001).

Aging has several morphological, functional, biochemical, and psychological changes. Such modifications determine the gradual loss of the individual's ability to adapt to the environment, causing greater vulnerability, the incidence of pathological processes, and accidents (Mazo et al., 2007; Lopes, 2000). About the latter, the fall is the most common. According to the World Health Organization, about 424,000 fatal falls occur every year in the world (Wu; Ouyang, 2017). A fall episode is characterized by when the individual suffers an imbalance, and the center of gravity takes him to the ground (Ungar et al., 2013).

Several factors associated with the fall, including the age of over 75 years, the female gender, and separated or divorced marital status, are reported in the National Health Survey (Pimentel et al., 2018). However, other studies also relate the accident to the lack of a companion and inadequate environments, especially unpredictable conditions in houses and streets (Cristina Traldi et al., 2016; Batista Moura et al., 2016). Some of these conditions can be correlated with social inequality and the lack of public policies present in society. Therefore, this investigation's objective is to propose a reflection on some social factors associated with falls in the elderly.

METHODOLOGY

The study was carried out from a qualitative approach, using a narrative literature review as a method. The studies were selected through a search in the Pubmed, Scielo and google academic databases, from March to July 2020, using the theme of this review, as well as the keywords: Fall in the elderly, social factors, lousy lighting, socioeconomic status, socioeconomic development, income, public policies, physical activity, as descriptors. The inclusion criteria in the sample were studies that addressed the factors associated with falls in the elderly. Studies that did not address such aspects, literature reviews, and that were not associated with social factors or physical activity in the studied public were excluded.

RESULTS/DISCUSSION

When analyzing the possible causes or factors that make falls possible in the elderly, we divided into two groups: Intrinsic and extrinsic. The first refers to the biological tissue of the elderly and extrinsic factors, being the individual's interaction with the environment (Mahler; Sarvimäki, 2010; World Health Organization, 2010; Walker; Davina; Timmons, 2011). The present narrative review focused only on extrinsic social factors.

First, it is crucial to analyze the environment experienced by this older adult so that he does not become a risk for him. Thus, lighting, high or narrow steps, slippery floors can increase the chance of falls (Kallin et al., 2002). Additionally, public policies and social support are related to these individuals' health and disease processes (Araújo et al., 2006). The type of housing, transportation, and social support received can influence functional independence and even the elderly's decline.

The individual's socioeconomic level can influence the environment in which he lives and, the study by Virtuoso-Júnior et al. (2016) showed that the lower socioeconomic level is significantly associated with more significant functional disability in the elderly. Also, socioenvironmental risk factors, such as inadequate housing, limited access to health services, and lack of resources, can increase the risk of falls among the elderly (Messias; Neves, 2009; World Health Organization, 2010). However, some studies with elderly Brazilians have found no significant association between income and the prevalence of falls in the elderly (Gullich; Cordova, 2017; Neto et al., 2017).

The lifestyle can also be considered an extrinsic factor in the influence of the fall, both positive and negative. Thus, alcohol consumption can be considered a risk factor for falls in the elderly (Roe et al., 2009). Additionally, the ingestion of certain medications can alter the elderly's internal physiology, making them more vulnerable to a fall episode (Maia et al., 2011; Pereira; Vogelaere; Baptista, 2008; Walker; Davina; Timmons, 2011). On the other hand, the practice of physical activity can be an important ally in combating falls. The scientific literature regarding the role of physical exercise in controlling fall prevention (El-khoury et al., 2013; Gillespe et al., 2012; Sherrington et al., 2008). Parallel to this, physically active older adults tend to be less afraid of the accident and less reduced mobility, balance and ability to walk when compared to physically inactive people (Padoin et al., 2010), while inactive older adults have less mobility and are more prone to falls (Guimarães et al., 2004). However, even with so many benefits, it is still seen that most of these individuals are physically inactive.

A study using the National Health Survey found 37.3% of the elderly are physically active, thus gaining prominence for being one of the groups that least practice leisure physical activity in Brazil (Malta et al., 2015). This fact corroborates the systematic review by Rodrigues et al. (2017), which showed that older adults with low income and a lower level of education are associated with a higher level of occupational, physical activity and commuting, while those with higher income and schooling are more likely to engage more in physical leisure activities (Rodrigues et al., 2017).

There is substantial social inequality among the elderly in Brazil. A study comparing the Brazilian population between the years 1998 and 2008 about income in the use of health services found that, although there was a reduction in inequality in 2008, the health conditions of the most impoverished population, such as adverse perception health, inability to perform daily activities, was higher among the most impoverished elderly, when compared to the richest (Lima-costa et al., 2012). Additionally, the social vulnerability can lead to a higher probability of mortality from pneumonia, protein-calorie malnutrition, tuberculosis, diarrhea/gastroenteritis, and transport accidents (Silva et al., 2008). However, no studies directly relate to social inequality and the decline in the elderly Brazilian population. Therefore, it suggests cross-sectional or longitudinal studies that relate these two themes.

CONCLUSION

Falls are very recurrent accidents in the elderly and can have drastic consequences on mobility, independence, and even mortality of the individual. Several factors contribute to the increased risk of falling, and the poorly adapted environment and the lack of access to health could be an essential risk factor for the accident's occurrence. Besides, lifestyle seems to be necessary, which drinking can negatively influence and physical activity positively in terms of preventing falls. Further studies in this area are needed, mainly in the Brazilian population.

REFERENCES

Araújo, S. S. C. D., Freire, D. B. D. L., Padilha, D. M. P., & Baldisserotto, J. (2006). Suporte social, promoção de saúde e saúde bucal na população idosa no Brasil. *Interface-Comunicação, Saúde, Educação, 10,* 203-216. Batista Moura, S. R., Siqueira Marques Junior, M. A. S., de Oliveira, T. A., Silva Nascimento, L. D., Vasconcelos Mesquita, G., & Pearce de Oliveira Brito, J. N. (2016). Fatores associados à queda de idosos que podem resultar em fratura de fêmur. *Journal of Nursing UFPE/Revista de Enfermagem UFPE*.

Cristina Traldi, M., Pamella Chiquetto, C., Zenardi Pelissoli, F., & da Fonseca, M. R. C. (2016). Frequência e fatores associados à queda em idosos no domicílio. *Revista Saúde*, *10*.

das Nações, U. F. D. P. (2012). Unidas. Envelhecimento no Século XXI: Celebração e Desafio.

El-Khoury, F., Cassou, B., Charles, M. A., & Dargent-Molina, P. (2013). The effect of fall prevention exercise programmes on fall induced injuries in community dwelling older adults: systematic review and meta-analysis of randomised controlled trials. *BMj*, *347*, f6234.

Gillespie, L. D., Robertson, M. C., Gillespie, W. J., Sherrington, C., Gates, S., Clemson, L. M., & Lamb, S. E. (2012). Interventions for preventing falls in older people living in the community. *Cochrane database of systematic reviews*, (9).

Guimarães, L. T., Galdino, D. C. A., Martins, F. L. M., Vitorino, D. F. M., Pereira, K. L., & Carvalho, E. M. (2004). Comparação da propensão de quedas entre idosos que praticam atividade física e idosos sedentários. *Revista neurociências*, *12*(2), 68-72.

Gullich, I., & Cordova, D. D. P. (2017). Queda em idosos: estudo de base populacional. *Revista da Sociedade Brasileira de Clínica Médica*, *15*(4), 230-234.

Instituto Brasileiro de Geografia e Estatística (2013). Diretoria de Pesquisas, Coordenação de População e Indicadores Sociais. Projeção da população do Brasil por sexo e idade para o período 2000/2060 e Projeção da população das unidades da federação por sexo e idade para o período 2000/2030. Rio de Janeiro: agosto de 2013.

Kallin, K., Lundin-Olsson, L., Jensen, J., Nyberg, L., & Gustafson, Y. (2002). Predisposing and precipitating factors for falls among older people in residential care. *Public health*, *116*(5), 263-271.

Klesges, L. M., Pahor, M., Shorr, R. I., Wan, J. Y., Williamson, J. D., & Guralnik, J. M. (2001). Financial difficulty in acquiring food among elderly disabled women: results from the Women's Health and Aging Study. *American Journal of Public Health*, *91*(1), 68.

Lima-Costa, M. F., Facchini, L. A., Matos, D. L., & Macinko, J. (2012). Cambios en diez años de las desigualdades sociales en salud de los ancianos brasileños (1998-2008). *Revista de Saúde Pública*, *46*, 100-107.

LOPES, A. Os desafios da gerontologia no Brasil. Campinas – SP: Alínea, 2000.

Maia, B. C., Viana, P. S., Arantes, P. M. M., & Alencar, M. A. (2011). Consequências das quedas em idosos vivendo na comunidade. *Revista Brasileira de Geriatria e Gerontologia*, 14(2), 381-393.

Malta, D. C., Andrade, S. S. C. D. A., Stopa, S. R., Pereira, C. A., Szwarcwald, C. L., Silva Júnior, J. B. D., & Reis, A. A. C. D. (2015). Estilos de vida da população brasileira: resultados da Pesquisa Nacional de Saúde, 2013. *Epidemiologia e Serviços de Saúde*, 24, 217-226.

Mahler, M., & Sarvimäki, A. (2010). Indispensable chairs and comforting cushions— Falls and the meaning of falls in six older persons lives. *Journal of Aging Studies*, 24(2), 88-95.

Mazo, G. Z., Liposcki, D. B., Ananda, C., & Prevê, D. (2007). Condições de saúde, incidência de quedas e nível de atividade física dos idosos. *Brazilian Journal of Physical Therapy*, *11*(6), 437-442.

McNicoll, G. (2006). United Nations Department Of Economic and Social Affairs, Population Division: Population, Resources, Environment and Development Database, Version 4.0. *Population and Development Review*, *32*(4), 790-791.

Muraki, T., Nagao, T., & Ishikawa, Y. (2001). A preliminary investigation to explore the effects of daytime physical activity patterns on health-related QOL in healthy community-dwelling elderly subjects. *Physical & Occupational Therapy in Geriatrics*, *19*(2), 51-62.

Neto, J. A. C., Brum, I. V., Braga, N. A. C., Gomes, G. F., Tavares, P. L., & Silva, R. T. C. (2017). Percepção sobre queda como fator determinante desse evento entre idosos residentes na comunidade. *Geriatr Gerontol Aging [Internet]*, *11*(1), 25-31.

Organização Mundial da Saúde. (2010). Relatório global da OMS sobre prevenção de quedas na velhice.

Padoin, P. G., Gonçalves, M. P., Comaru, T., & Silva, A. M. V. D. (2010). Análise comparativa entre idosos praticantes de exercício físico e sedentários quanto ao risco de quedas. *O mundo da saúde*, *34*(2), 158-64.

Pedersen, M. T., Vorup, J., Nistrup, A., Wikman, J. M., Alstrøm, J. M., Melcher, P. S., ... & Bangsbo, J. (2017). Effect of team sports and resistance training on physical function, quality of life, and motivation in older adults. *Scandinavian journal of medicine & science in sports*, 27(8), 852-864.

Pereira, C. L., Vogelaere, P., & Baptista, F. (2008). Role of physical activity in the prevention of falls and their consequences in the elderly. *European review of aging and physical activity*, *5*(1), 51-58.

Roe, B., Howell, F., Riniotis, K., Beech, R., Crome, P., & Ong, B. N. (2009). Older people and falls: health status, quality of life, lifestyle, care networks, prevention and views on service use following a recent fall. *Journal of clinical nursing*, *18*(16), 2261-2272.

Rodrigues, P. A. F., Melo, M. P., Assis, M. R., & Palma, A. (2017). Condições socioeconômicas e prática de atividades físicas em adultos e idosos: uma revisão sistemática. *Revista Brasileira de Atividade Física e Saúde*, 22(3), 217-232.

- Sherrington, C., Whitney, J. C., Lord, S. R., Herbert, R. D., Cumming, R. G., & Close, J. C. (2008). Effective exercise for the prevention of falls: a systematic review and metaanalysis. *Journal of the American Geriatrics Society*, *56*(12), 2234-2243.
- Silva, V. D. L., Leal, M. C. C., Marino, J. G., & Marques, A. P. D. O. (2008). Associação entre carência social e causas de morte entre idosos residentes no Município de Recife, Pernambuco, Brasil. *Cadernos de Saúde Pública*, *24*, 1013-1023.
- Ungar, A., Rafanelli, M., Iacomelli, I., Brunetti, M. A., Ceccofiglio, A., Tesi, F., & Marchionni, N. (2013). Fall prevention in the elderly. *Clinical Cases in mineral and bone metabolism*, *10*(2), 91.
- Virtuoso-Júnior, J. S., Tribess, S., Menezes, A. S., Meneguci, J., & Sasaki, J. E. (2016). Fatores associados à incapacidade funcional em idosos brasileiros. *Revista Andaluza de Medicina del Deporte*.
- Walker, W., Porock, D., & Timmons, S. (2011). The importance of identity in falls prevention. *Nursing older people*, 23(2).
- Wu, H., & Ouyang, P. (2017). Fall prevalence, time trend and its related risk factors among elderly people in China. *Archives of gerontology and geriatrics*, *73*, 294-299.

Recebido em: 15/06/2020 Aceito em: 09/07/2020

Endereço para correspondência: Júlia Araujo de Figueiredo julia.afgd@gmail.com



Esta obra está licenciada sob uma Licença Creative Commons