

Federal University of Rio de Janeiro State



# Journal of Research Fundamental Care Online

ISSN 2175-5361  
DOI: 10.9789/2175-5361

## INTEGRATIVE REVIEW OF LITERATURE

Determinantes do risco de quedas entre idosos: um estudo sistemático

Determinants of risk of falls among elderly: a systematic study

Factores determinantes del riesgo de caídas en ancianos: un estudio sistemático

Emilene Nóbrega Medeiros<sup>1</sup>, Maria Miriam Lima da Nóbrega<sup>2</sup>, Maria de Lourdes de Farias Pontes<sup>3</sup>, Marileuza Maria de França Vasconcelos<sup>4</sup>, Maria do Socorro Guedes de Paiva<sup>5</sup>, Maria Adelaide Silva Paredes Moreira<sup>6</sup>

### ABSTRACT

**Objective:** to identify from a systematic literature review the main risk factors for falls among the elderly. **Methods:** the search in the databases was performed using the descriptors fall and elderly; were analyzed 51 articles published from 2005 to 2010, expressing on their resumes risk factors for falls in the elderly. **Results:** the main fall risk factors in the elderly are related to biological, behavioral, environmental and socioeconomic. Other factors identified were the muscle reduction, balance, depression, obstacles in the way, abuse, lack of handrails, crime and the history of falls. **Conclusion:** this study sought to provide a scientific north, not only to aid in the clinical assessment and, in turn, improve the care provided to those under-risk of falling at different levels of health care, more in any case, has its main focus on context of primary care. **Descriptors:** Elderly, Risk of falls, Risk factors.

### RESUMO

**Objetivo:** identificar a partir de uma revisão sistemática da literatura os principais fatores de risco de quedas entre idosos. **Método:** a busca nas bases de dados foi feita por meio dos descritores queda and idoso; foram analisados 51 artigos, publicados no período de 2005 a 2010, que expressavam em seus resumos fatores de risco de quedas em idosos. **Resultados:** os principais fatores de risco de queda no idoso estão relacionados aos aspectos biológicos, comportamentais, ambientais e socioeconômicos. Outros fatores identificados foram a diminuição muscular, equilíbrio, depressão, obstáculos no caminho, maus tratos, ausência de corrimão, a criminalidade e a história de queda. **Conclusão:** buscou-se com esse estudo oferecer um norte científico, não só para o auxílio na avaliação clínica como, por sua vez, melhorar a assistência prestada àqueles sob-risco de queda nos diferentes níveis de atenção à saúde, mais impreterivelmente, tenha seu foco maior no contexto da atenção primária. **Descritores:** Idoso, Risco de quedas, Fatores de risco.

### RESUMEN

**Objetivo:** identificar a partir de una revisión sistemática de la literatura los principales factores de riesgo de caídas en las personas mayores. **Método:** se realizó la búsqueda en las bases de datos utilizando los descriptores caer y personas mayores; fueron analizados 51 artículos publicados desde 2005 a 2010, que expresan en sus resúmenes factores de riesgo de caídas en las persona mayores. **Resultados:** Los principales factores de riesgo de la baja en personas mayores están relacionados con aspectos biológicos, conductuales, ambientales y socioeconómicos. Demás factores identificados fueron la reducción muscular, el equilibrio, la depresión, los obstáculos en el camino, el abuso, la falta de pasamanos, el crimen y la historia de las caídas. **Conclusión:** Este estudio trata de proporcionar un norte científico, no sólo para ayudar en la evaluación clínica y, a su vez, mejorar la atención a los menores de riesgo de caer en los diferentes niveles de atención de la salud, más, en todo caso, tiene su foco principal en contexto de la atención primaria. **Descriptor:** Ancianos, Riesgo de caídas, Factores de riesgo.

<sup>1</sup>Psychologist. Master in Nursing UFPB. Paraíba, Brazil. E-mail: emilenenobrega@uol.com.br. <sup>2</sup>Nurse. PhD in Nursing UNIFESP. Professor, Department of Nursing, Public Health and Psychiatry. Professor of the Graduate Program in Nursing UFPB. CNPq Researcher. Paraíba, Brazil. E-mail: miriam@ccs.ufpb.br. <sup>3</sup>Nurse. PhD in Nursing from the EERP-USP; Professor, Department of Nursing, Public Health and Psychiatry. Paraíba, Brazil. E-mail: pontesshalom@gmail.com. <sup>4</sup>Nurse of the Family Health Program. Student of Specialization Course Attention to Health and Ageing MS / UFPB. Paraíba, Brazil. Email: mmaryfv@hotmail.com. <sup>5</sup>Dentist Family Health Program. Student of Specialization Course Attention to Health and Ageing MS/UFPB. Paraíba, Brazil. Email: msguedes10@hotmail.com. <sup>6</sup>Physiotherapist, PhD in Health Sciences. Professor of the Postgraduate Program in Nursing UFPB. Postdoctoral Researcher of the National Program of Capes. Paraíba, Brazil. E-mail: jpadelaide@hotmail.com.

## INTRODUCTION

**P**opulation aging is part of the reality of most societies. What was once considered a phenomenon is currently seen as a response to changes such as the decline in fertility and mortality rates and increased life expectancy. The growth of the world's elderly population occurs rapidly. It is estimated that in 2050 the population over 60 years to reach two billion people and 85% of them living in developing countries. This data will be history of mankind, occurring for the first time the number of elderly people is greater than the number of persons under 14 years old.<sup>1</sup> Given this reality, the older segment, over 80 years old, is growing more and more will be particularly susceptible to falls, injuries and complications of their chronic condition considered due to the natural aging process. In Brazil, the reality is no different, it is estimated that in 2025 we will have about 32 million elderly.<sup>1-2</sup> According to 2008 data from the National Household Sample Survey (PNAD), 11,1% of Brazilians are people aged 60 and over while 7,2% of the population account for children 0-4 years.<sup>3</sup>

It is known that the elderly population has, by its own health conditions, high levels of vulnerability to a significant number of events such as chronic diseases, disability, falls and increasingly lengthy hospitalizations. The falls, in particular, has significant predominance among the external factors of unintentional injuries. According to the age group the estimation of the incidence of falls is of 28% to 35% in the elderly aged over 65 years and 32% to 42% in persons over the age of 75 years.<sup>1</sup>

The incidence of falls increases with age, with the level of fragility, with the location of housing and can also vary between different countries. Prospective studies show that 30% to 60% of the population aged over 65 years have suffered a fall each year and half presents multiple falls, these occurrences, approximately 40% to 60% suffer some kind of injury, most around 30% to 50% less serious, 5% to 6% more severe injuries without fractures and 5% of fractures. Is valid to note that for the elderly who have suffered a fall danger of falling again is high, around 60% to 70%, the following year.<sup>4</sup>

Seen as an important public health problem often requires medical attention.<sup>1</sup> It is responsible for 20% to 30% of minor injuries and is the underlying cause of 10% to 15% of all queries to the emergency services. More than 50% of hospital admissions are related to injuries occurring among people over 65 years of age and main consequences caused by the fall of all admissions to the hospital, are hip fractures, traumatic brain injuries and injuries of upper limbs.<sup>5</sup> The magnitude of the falls gets to prolong the duration of hospitalizations and when hip fracture reaches 20% the percentage of death after one year of the event. This percentage rises to 40% when referring to all deaths by injury.<sup>1</sup>

Among the consequences due to the occurrence of falls in the elderly, is to dependence, loss of autonomy, confusion, immobilization and depression, which carries increasingly restrictions regarding their daily activities, appearing mostly feeling of

uselessness.<sup>6-7</sup> In the face of crippling and negative reality caused by the fall is seen as essential for active ageing and secure its prevention, otherwise the number of injuries resulting from falls may reach 100% highest in the year 2030 when compared to the last three decades has been the order of 131%.<sup>1</sup>

The fall serves as a beacon from the beginning of the decline of functional capacity, as well as a symptom of a new disease, they occur due to loss of balance caused by osteoarticular system's primary problems and neurological system, as well as an adverse medical condition that may affect the mechanisms of balance and stability.

its definition varies according to the actors involved; for the elderly is defined as loss of balance, for some health professionals, are events that lead to injury and damage to health, but according to the previous guideline fall "is the unintentional displacement of the body to a level lower than the initial position with inability to fix in a timely manner, determined by multifactorial conditions undermining the stability".<sup>8</sup>

To define the factors of protection from the risk of falling it is necessary that they be understood within the perspective of the course of life of each individual. The elderly are not considered as a homogeneous group and individual diversity increases with age and this particularity of life the speed of decline can be influenced and reversed at any age, from individual measures and public policies to valorization of the elderly.<sup>1</sup>

When we consider the fall a factor of morbidity and mortality, especially in the increasingly elderly population (85 years and over), causing several losses, costs, damages emotional, financial, social, for the individual, family and society, becomes is possible to describe the relevance of this study where it is necessary to develop research that promote the expansion of knowledge about the risk of falls in elderly, targeting in particular the identification of risk factors, thus favoring care lines and public policy prevention, to be incorporated into the practices of health professionals and the extent of family, longing for a safe and healthy aging. Thus, this study aimed to identify, from a systematic literature review, the main risk factors for falls among elderly.

## METHOD

The study is a systematic review of the literature conducted to seek consensus on any specific theme and synthesize the knowledge of a given area through methodological steps which include the formulation of the research question, identification, selection, and critical evaluation of scientific studies.

The research question: what are the understood risk factors of falls in the elderly pointed to by the relevant literature? To answer this question, we analyzed a literary corpus consisting of full papers, published during the period from 2005 to 2010, describing about the theme. The initial search for the location of the scientific articles was made at the VHL in the databases Scientific Electronic Library Online (SciELO), Latin American

literature and Caribbean Health Sciences (LILACS) and International Health Sciences Literature (MEDLINE), using as a descriptor falls and seniors.

There was a significant number of publications which contained the expression described in their titles, however, to effect the reading and analysis of their summaries, it was observed that they have not addressed the risk factors of falls in the elderly, but other related concepts, such as functional incapacity, functional balance, morbidity and mortality of elderly, consequences of the risk of falling, fractures in the elderly, comorbidity, vulnerability, prevention, among others.

The initial survey contained 3.960 articles; was used as inclusion criteria for establishment of the database, the full articles, comprising 448 articles in Portuguese language, and remaining 134 articles to limit the period 2005 to 2010, 115 articles. Of this total, was used as exclusion criteria thesis, dissertation and thesis (8 articles), article that it was not possible to access (Article 1) or repeated (8 items), for a total of 17, then taking a sample for evaluation of 98 articles. Of these 98 articles, 47 articles did not specifically describe a topic. After the procedures, as regards the specificities and literature search, the set of scientific papers analyzed comprised 51 journal articles that expressed in their resumes, risk of falls in elderly people. A critical review of articles consisted initially of thorough reading of the same and, a posteriori, preparation of summary tables, taking as parameters the risk factors of falls in the elderly, to identify information relevant to answer the research question.

## RESULTS AND DISCUSSION

Although the contexts are interconnectable, your layers will be presented separately, following the proposal by the theoretical framework in order to facilitate its understanding didactically division.

In this perspective, the immediate context will you approach the actions taken by the nurse on leprosy, in the scenario of Primary Health Care; the specific context address the role of a nurse in that level of performance in health; beliefs, myths and fears surrounding leprosy will be embraced by the general context; metacontext and health policies that subsidize the care for leprosy patients will be presented.

### **Shares of nurses in primary health care front bearer of leprosy**

The APS is focused on solving health problems in developing preventive actions, to promote health and healing. Its guiding principle the establishment of links between the multidisciplinary team and the users ascribed the territory covered.<sup>8</sup>

In this sense it is stressed the development of the nursing work process on the shares of leprosy control through consultations nursing,<sup>9</sup> which is considered an opportune time to establish links with possibilities of recognizing the sociocultural context in time which the individual belongs,<sup>6</sup> which favors the targeting of the therapeutic approach to be adopted.

In addition to consultation as a patient care strategy for leprosy, nursing must organize the control actions of patients and contacts, conduct active search for new cases, making home visits to care for the patient and family, perform dermato-neurologic exam, assess and prevent physical disabilities and also develop educational activities.<sup>2,9</sup>

Regarding the prescription of medication, this is an assured nurse to practice provided it is in accordance with the established public health programs, as with MDT to treat leprosy. So, in addition to providing information on dosage, adverse drug reactions, taking note of supervised dose and identify possible side effects, nurses can prescribe MDT.<sup>10</sup>

Although the treatment of leprosy is long, it prevents physical disability prevents transmission of the disease and leads to cure.<sup>6</sup> Therefore, to be effective it is necessary that the nurse accompanies the patient throughout the treatment and provide clarification as to the aspects of leprosy and MDT.<sup>10</sup>

Thus, the practices of nurses can contribute to the prevention of diseases (such as physical disabilities) and promoting the health of individuals, as well as health education for patients, their families and the general population.<sup>6,10</sup>

The development of educational activities aimed at objectively healthy individuals early detection of cases in favor diagnosis self-suspicion and disclosure of health services.<sup>2,5</sup> Thus, it is ascertained that the process of working on leprosy developed by the nurse should address all individuals sick, healthy or at risk.

#### **Role of the nurse in the scope of primary health care**

In Brazil, the APS is included in the National Primary Care Policy (BANP), regulated by the Ordinance of 2488 October 21, 2011 and is considered one of the gateways to the health system.<sup>11</sup>

The Family Health Strategy is the main guiding principle of the NHS and APS has the practice of attention focused on the health needs of this population in a defined geographical area, which should be assisted by multidisciplinary health care team.<sup>12</sup>

In health, the raw materials of the target action are humans. Therefore, the training of health professionals should be fairly consistent and able to cover the whole complexity of human integral and interdisciplinary way.<sup>13</sup>

According to BANP, nurses must fully assist individuals; perform nursing consultation, request additional tests and prescribe medications as directed profession; manage the actions taken by the nursing staff and the community health workers; conduct continuing education activities; and manage inputs required to run the Unity Family Health.<sup>11</sup>

In this perspective, we believe that nurses need a list of knowledge to provide quality care, especially with regard to priority activities established by the Ministry of Health, as the elimination of leprosy.

Being the professional who has more contact with the enrolled population, nurses are more sensitized to recognize the problems of the population. Therefore, in addition to assisting in the treatment of disease, it is the nurse play in APS actions that address the process of health education, preventive measures and social reintroduction user when necessary.<sup>14</sup>

Moreover, nurses have to act in the management profile of the health strategies of the family, touting the service organization in order to guarantee a complete service to the user, the sizing of resources, diagnostic situations for action planning and optimization of services to meet the needs of employees and customers of the institution.<sup>15</sup>

Thus, given the care and administrative skills of nurses, it can develop its activities with a view to comprehensive care of leprosy and ported to work in primary care contributing to quality care, as well as with the elimination of the disease.

#### **Beliefs, myths and fears that underlie leprosy**

The history of leprosy is widely marked by superstitions and prejudices that plagued the image of the individual patient. Many recognized the notion of sin and how crippling disease, deformities generated stigma that often led to the isolation of patients, which, subsequently, became compulsory in an attempt to control the disease index.<sup>16</sup>

Even with the existence of methods of diagnosis, treatment and cure, is still present in the uninformed group guided fears the contagion, the mutilations, the social isolation and the presence of self-rejection from the influence of stigma on self-esteem of patients with leprosy.<sup>17</sup>

The still existing prejudices with the disease are associated with deformities and disabilities affecting daily activities and work capacity, generating social and psychological problems that limit are accentuated by physical pain of leprosy reactions.<sup>6,17</sup>

Moreover, when people affected by leprosy discover they are carriers of the disease before they are afraid of the possibility of acting as a means of contamination to other individuals, especially those with whom I have greater proximity.<sup>16</sup>

Then it is evident an environment of judgment and emotional reactions of the patient and the disease, such as the lack of factors related to leprosy, the change in sensitivity that facilitates the occurrence of accidents, disabilities and work days and lack of perspective healing in the face of leprosy reactions.<sup>17</sup>

Through nursing consultation comprehensive care appropriate to the recognition of the needs of the individual with identification of psychosocial problems, economic, emotional and cultural needs to be developed in addition to those related to disease itself, such as altered sensation, neuritis and disabling potentiation.<sup>6</sup>

Moreover, it is essential to have dialogue between the patient, family and other contacts in the perspective of the doubts about leprosy and aiming to reduce the stigma of the disease, providing a social life without losses in personal and work relationships.<sup>16</sup>

#### **Policies that subsidize care for leprosy patients**

The World Health Organization (WHO) uses the prevalence of less than 1 case per 10,000 population as a parameter for elimination of leprosy and considers the incidence in children under 15 years and the registration of patients with high disability relevant to direct control the disease.<sup>9</sup> also emphasizes the importance of early detection, assessment of contacts and reducing the stigma of the disease.<sup>18</sup>

In this perspective, the National Leprosy Control guides the actions of disease control in line with the principles of the NHS, in all instances and complexities levels of health care.<sup>19</sup>

With Ordinance No. 3125, of October 7, 2010 the guidelines for surveillance, care and control of leprosy with the aim of organizing the network of care for leprosy patients, strengthen epidemiological surveillance were approved, as well as direct promotion strategies health.<sup>19</sup>

Also according to Decree No. 3125/2010, is a private person with leprosy at the service throughout the network of the NHS and, similarly, complications and sequelae from the disease should receive assistance according to their specificity.<sup>18</sup>

The organization and implementation of State and Municipal Networks Attention leprosy were standardized by the Ministry of Health through Ordinance No. 594, October 29, 2010 which includes the Table of Specialized Services of the National Registry of Health System, the service Comprehensive Care in Leprosy.<sup>20</sup>

In this perspective, the Strategic Agenda was prepared by the Secretariat of Health Surveillance (SVS) to direct the priority actions in the period from 2011 to 2015, among which, the elimination of leprosy was cited as a goal to be achieved through the organization of integrated stock control and elimination of communicable diseases.<sup>21</sup>

In order to optimize the actions, set the following goals to be achieved by 2015: 90% cure rate in new cases of leprosy and examine 80% of their household contacts; reduce the rate of detection of new cases of leprosy in children less than 15 years old; and reduce the prevalence rate of leprosy to 0,98/10.000.<sup>21</sup>

To this end, in 2011 the integrated plan of eliminating leprosy and the Secretariat of Health Surveillance was prepared created the General Coordination of Diseases and Leprosy Elimination in (CGHDE) with the aim of strengthening actions and optimize the resources available to deal with this group of diseases.<sup>22</sup>

In addition, following the epistemological trends emerging paradigm regarding the work process in health, the role of a nurse walks along the proposals of this scientific revolution, where actions of health are related to the socio-cultural, historical and political context, with appreciation of subjectivity individuals.<sup>23</sup>

## CONCLUSION

Upon completion of this study, the context in which the actions of nursing in primary health care front for leprosy patients was better understood, allowing its sharing and making it more diffuse with a view to their application in nursing practices.

Then it was found that nursing actions directed to the object of study proposed permeate interactive layers of context and are directly influenced by a broader policy that guides and the performance of nurses in primary care in order to achieve the objectives proposed by the Ministry of Health regarding the cure of leprosy cases, examination of household contacts and reducing the prevalence rate to less than one case of leprosy per 10.000 inhabitants.

Thus, the activities of the nurse must consider the four levels of contextual interaction, since the actions of consultation, Home visits, control of contacts and development aimed at leprosy in the immediate level educational activities, given the purpose of the Primary Health Care described in the specific context.

Furthermore, one must consider the challenges that must be overcome in relation to beliefs, stigma and prejudice on leprosy, that the proposed work scope established by metacontextual conditions.

Therefore, to connect and analyze the levels of contextual interaction is believed that nurses can provide assistance for leprosy patients involving not only the individual patient but also their family, considering their peculiarities and cultural aspects that are shrouded the phenomenon studied.

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Received on: 01/08/2014  
Required for review: No  
Approved on: 01/12/2014  
Published on: 20/12/2014

Contact of the corresponding author:  
Mônica Gisele Costa Pinheiro  
Natal - RN - Brasil  
Email: monicapinheiro\_@live.com