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INTEGRATIVE REVIEW OF THE LITERATURE

Assistência de enfermagem a idosos com traumas ósseos: uma revisão integrativa

Nursing care to elderly with bone fractures: an integrative review

Cuidados de enfermería para la tercera edad con fracturas óseas: una revisión integrativa

Ana Caroline Fonseca Landim ¹, Fernanda Machado Pinheiro ², Fernanda Soares Pessanha ³, Luiz dos Santos ⁴, Geilsa Soraia Cavalcanti Valente ⁵

ABSTRACT

Objective: To describe the profile of the elderly victims of bone trauma and as how nursing has been active in assisting these clients. **Method:** integrative Review, held in LILACS database with the keywords: Elderly, Nursing and Trauma, in order to answer the following question: <<"What is the profile of the elderly who suffer from bone trauma and the role of nursing care to these customers?">>. **Results:** people over 80 years old suffer more trauma primarily with neuromotor weaknesses, using multiple medications and comorbidities. Nursing care for the elderly is still traumatized poor because there was a significant incidence of iatrogenic complications. **Conclusion:** the risk factors for the occurrence of traumatic events in the elderly favor the loss of quality of life, increased functional dependence, burden for caregivers and institutionalization. The records of care provide visibility and ensure continuity of care in a qualified way. **Descriptors:** Nursing, Elderly, Traumatology, Wounds and injuries.

RESUMO

Objetivo: Descrever o perfil dos idosos que foram vítimas de traumas ósseos e como a enfermagem tem atuado na assistência a estes clientes. **Método:** revisão integrativa, realizada na base de dados LILACS a partir dos descritores: Idoso, Enfermagem e Trauma, no intuito de responder a seguinte questão:<<"Qual o perfil dos idosos que sofrem traumas ósseos e qual o papel da enfermagem na assistência a estes clientes?" >>. **Resultados:** sofrem mais traumas os indivíduos prioritariamente acima de 80 anos, com debilidades neuromotoras, usando múltiplas medicações e com comorbidades. O cuidado de enfermagem aos idosos traumatizados ainda é deficiente, pois se observou uma incidência significativa de iatrogenias. **Conclusão:** os fatores de risco para a ocorrência de eventos traumáticos no idoso favorecem a perda da qualidade de vida, aumento da dependência funcional, sobrecarga aos cuidadores e institucionalização. Os registros dos cuidados prestados proporcionam visibilidade e garantem a continuidade do cuidado de forma qualificada. **Descritores:** Enfermagem, Idoso, Traumatologia, Ferimentos e lesões.

RESUMEN

Objetivo: Describir el perfil de los ancianos que fueron víctimas de traumas óseos y cómo la enfermería ha actuado en la asistencia a estos clientes. **Método:** revisión Integradora, realizada em la base de datos LILACS a partir de los descriptores: Anciano, Enfermería y Trauma, con el intuito de responder a la siguiente pregunta:<<"Cuál es el perfil de los ancianos que sufren traumas óseos y cuál es el papel de la enfermería en la asistencia a estos clientes?">>. **Resultados:** sufren más traumas individuos prioritariamente con más de 80 años, con debilidades neuromotoras, usando múltiples medicaciones y con comorbidades. El cuidado de enfermería a los ancianos traumatizados todavía es deficiente, ya que se observa una incidencia significativa de iatrogenias. **Conclusión:** los factores de riesgo para la ocurrencia de eventos traumáticos en el anciano favorecen la pérdida de la calidad de vida, aumento de la dependencia funcional, sobrecarga a los cuidadores y institucionalización. Los registros de los cuidados prestados proporcionan visibilidad y garantizan la continuidad del cuidado de forma calificada. **Descritores:** Enfermería, Anciano, Traumatología, Heridas y Lesiones.

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INTRODUCTION

In Brazil, people over 60 years old are considered elderly.¹ In 2002, Brazil occupied the sixth place among countries with the largest number of elderly (14.1 million people), and probably will occupy the fifth place in 2025 (with 33.4 million).²

All around the world, the proportion of people aged 60 years old or more is growing faster than any other age group. Between 1970 and 2025, it is expected an increase of 223%, or around 694 million, in the number of elderly people. In 2025, there will be a total of about 1.2 billion people over 60 years old. By 2050 there will be two billion, 80% in developing countries.³

Among elder people, the unintended falls, including those that could be considered irrelevant in young patients, are a big threat to their health, since falls often lead to injuries that affect negatively the level of dependency and the quality of life, becoming therefore a significant public health problem.⁴ According to data from the World Health Organization (WHO), between 28% and 34% of people over 65 years old, have at least one fall per year, percentages that increase according to age and result in rates of hospitalization for injuries ranging from 1.6 and 8.9 episodes every 100000 inhabitants.⁴

The occurrence of trauma in the elderly has been growing significantly, through the growth of this population. Currently, the most active lifestyle of the elderly raises exposure to risk of accidents. In addition to this factor, the physiological aging contributes: reducing visual acuity, decreasing hearing, use of medications, associated diseases and slow walking. Other organic systems have also decreased their functions: renal, pulmonary, cardiovascular, musculoskeletal and endocrine.⁵

Fall is the most frequent injury mechanism, followed by trampling. After the trauma, the elderly has a decline in their quality of life, unable to fully return to their initial state. Prevention through the reduction of exposure to risk of trauma is the best tool to decrease morbidity and mortality. Any minimal modification of physiological parameters may be evidence of a potentially lethal injury.⁵

In Gerontology context, acting through an interdisciplinary team, the elderly care is aimed at primarily the self-care and maintenance of an active and independent life, supporting also the family caregiver, doing efforts together (community and professionals) in the pursuit and achievement of policies and programs that enable the preservation of their dignity in social life.⁶

On this team, Nursing acts as individualized care for the elderly, taking into account their physical, psychic and environment limitations⁷, as well as in helping victims of bone trauma, where the functional evaluation of the elderly is a fundamental

part of nursing care. The aim of this study was to describe the profile of the Brazilian elderly victims of bone traumas and how nursing has been active in assisting these clients.

METHOD

The present work is an Integrative Review. It is a methodology that provides the knowledge synthesis and incorporation of the applicability of significant studies results in the practice. It is performed from the synthesis of research findings related to a problem or specific issue, being the most extensive methodological approach regarding reviews, allowing the inclusion of experimental and non-experimental studies for a thorough understanding of the phenomenon under examination.⁷ In this way, it is an important resource of the nursing practice based on evidences.

The data collection was carried out during November 1 to November 7, 2011 in database Lilacs (Latin American and Caribbean Literature on Health Sciences), from the following question: “What is the profile of the elderly who suffer bone traumas and the role of nursing in assisting these clients?”.

The database search was performed using the following keywords: Elderly, Nursing and Trauma. The intersection between them was done with the Boolean operator AND.

The following inclusion criteria used were: to present the full text available online, in Portuguese and Spanish, with year of publication between 2009 and 2011, being studies on health care of the elderly who suffered bone trauma. Works presenting specific themes were excluded (such as in the areas of primary care and public health, nursing training, etc.) as described in the results of this study.

The data were categorized by the thematic approach of the study objects and then the content analysis was performed as following: Risk Factors for Bone Trauma or for Worse Prognoses, Profile of the Elderly Victim of Bone Traumas and Performance of Nursing in Assistance to Traumatized Clients.

RESULTS E DISCUSSION

At the intersection of the three keywords (“Elderly”, “Trauma” and “nursing”) with the Boolean operator AND on the LILACS database, was not found any publication.

At the intersection of “Elderly” and “nursing” with the Boolean operator AND on LILACS database, 899 publications were obtained, in which 382 presented full texts online. From them, 371 were in Portuguese or Spanish, of which 132 were published

between 2009 and 2011. Among these 132, 13 were selected to compose the analysis and categorization proposed in this work. Thus, the 119 studies below have been evaluated and excluded because they do not have a thematic addressed in this study, as the following table.

Table 1 - Study thematic (Elderly and Nursing)	N
Primary health care/Public health	23
Nursing training	16
Cardiac or vascular disorders	13
Role of the caregiver in elderly care	13
Situations of dementia, depression, neurological disorders or cognitive changes	9
Aging process perception	8
Nursing care in perioperative period	8
Repeated articles from other intersections	7
Intestinal/kidney or urinary problems	6
Patients with Diabetes Mellitus	5
Nursing care in infectious diseases	4
Cancer patients	3
Nursing care in ICU	2
Medication therapy	2
Total	119

At the intersection of the keywords “Elderly” and “Trauma” with the Boolean operator AND on the LILACS database, 865 publications were obtained, but only 289 presented full text online. From them, 240 were in Portuguese or Spanish, of which 79 were published between 2009 and 2011. Among these 79, 14 were selected to compose the analysis and categorization proposed in this work. Thus, the 65 studies below have been evaluated and excluded because they did not have the thematic addressed in this study, as the following table.

Table 2 - Study thematic (Elderly and Trauma)	N
Nursing care in perioperative period	17
Eye or facial trauma	11
Influence of home environment/caregiver's action on elderly care	10
Assistance to the elderly, adolescents and adults	5
Visceral trauma	5
Cardiac or vascular disorders	4
Occupational diseases	4
Nursing care in infectious diseases	3
Situations of dementia, depression, neurological disorders or cognitive changes	2

Primary health care/Public health	2
Intestinal/kidney or urinary problems	1
Patients with respiratory limitations	1
Total	65

At the intersection of the keywords “nursing” and “Trauma” with the Boolean operator AND on the LILACS database, 206 publications were obtained, but only 93 presented full text online. From them, 90 were in Portuguese or Spanish, of which 31 were published between 2009 and 2011. Among these 31, 2 were selected to compose the analysis and categorization proposed in this work. Thus, the 29 studies below have been evaluated and excluded because they did not have the thematic addressed in this study, as the following table.

	N
Perception/nurse's work	10
Nursing training	7
Assistance to the elderly, adolescents and adults	3
Occupational diseases	3
Primary health care/Public health	2
Eye or facial trauma	1
Cardiac or vascular disorders	1
Situations of dementia, depression, neurological disorders or cognitive changes	1
Cancer patients	1
Total	29

From this evaluation of the publications, the following articles for discussion were obtained:

Author(s)	Year	Title	Magazine
1. Pokorski, S; Moraes, MA; Chiarelli, R; Costanzi, AP; Rabelo, ER.	2009	Nursing process: From literature to practice. What in fact are we doing? ⁽⁸⁾	Revista Latino-Americana de Enfermagem
2. Araújo, VB; Perroca, MG; Jericó, MC.	2009	Variability of Assistance Patient Complexity Degree in relation to nursing staff ⁽⁹⁾	Revista Latino-Americana de Enfermagem
3. Santos, JC; Ceolim, MF.	2009	Iatrogenic nursing in hospitalized patients ⁽¹⁰⁾	Revista da Escola de Enfermagem da USP
4. Aires, M; Paz, AA; Perosa, CT.	2009	Health situation and Dependency Degree of	Revista Gaúcha de Enfermagem

Institutionalized Elderly ⁽¹¹⁾				
5. Machado, TR; Oliveira, CJ; Costa, FBC; Araujo, TL.	2009	Evaluation of the presence of risk in elderly falls ⁽¹²⁾	Revista Eletrônica de Enfermagem	
6. Lima, AP; Mantovani, MF; Ulbrich, EM; Zavadil, ETC.	2009	Scientific production on the elderly hospitalization: A bibliographical research ⁽¹³⁾	Cogitare Enfermagem	
7. Oliveira, ARS; Costa, AGS; Sousa, VEC; Moreira, RP; Araújo, TL; Lopes, MVO; Galvão, MTG.	2009	Behaviors in the prevention of falls in patients with cerebrovascular accident ⁽¹⁴⁾	Revista de Enfermagem da UERJ	
8. Betancourt, GM; Basulto, SDV; Atencio, JV.	2009	Mortality by craniocerebral trauma in the elderly ⁽¹⁵⁾	Archivo médico de Camaguey	
9. Martínez, NAB.	2009	Prevention of accidents in the elderly ⁽¹⁶⁾	Revista de la Universidad de Medicina de Bogotá (Colombia)	
10. Ayes-Valladares, F; Alvarado, LT	2009	Clinic-therapeutic characterization of the Sternal Fracture at the School Hospital ⁽¹⁷⁾	Revista de Medicina de Honduras	
11. Moraes, FB; Silva, LL; Ferreira, FV; Ferro, AM; Rocha, VL; Teixeira, KS.	2009	Epidemiological and radiological assessment of femur fractures: Study of 200 cases ⁽¹⁸⁾	Revista Brasileira de Ortopedia	
12. Biazin, DT; Rodrigues, RAP.	2009	Profile of older people who have suffered trauma in Londrina-Paraná ⁽¹⁹⁾	Revista da Escola de Enfermagem da USP	
13. Motta, CCR; Hansel, CG; Silva, J.	2010	Profile of hospitalizations of elderly people in a public hospital ⁽²⁰⁾	Revista Eletrônica de Enfermagem	
14. Guedes, HM; Nunes, DP; Nakatani, AYK; Bachion, MM.	2010	Identification of nursing diagnoses in the activity/rest domain in the elderly hospitalized ⁽²¹⁾	Revista de Enfermagem da UERJ	
15. Costa, AGS; Oliveira, ARS; Moreira, RP; Cavalcante, TF; Araujo, TL.	2010	Identification of the risk of falls in the elderly after cerebrovascular accident ⁽²²⁾	Revista da Escola de Enfermagem Anna Nery	
16. Fernandes, MGM; Andrade, AN; Nóbrega, MML.	2010	Determinants of frailty in the elderly: a systematic review ⁽²³⁾	Online Brazilian Journal of Nursing	
17. Sousa, RM; Santana, RF; Santo, FHE; Almeida, JG; Alves, LAF.	2010	Nursing diagnoses Identified in Hospitalized Elderly: Association with the Geriatric Syndromes ⁽²⁴⁾	Revista da Escola de Enfermagem Anna Nery	
18. Suelves, JM; Martínez,	2010	Injuries from falls and factors associated in the elderly of	Revista Panamericana	

V; Medina, A.	Catalonia, Spain ⁽⁴⁾	de Salud Publica
19. Betancourt, GM; Hernández, AV; Atencio, JV. 2010	Hospital management in the lower brain injury trauma of the elderly ⁽²⁵⁾	Archivo médico de Camaguey
20. Betancourt, GM; Basulto, SV; Atencio, JV; Hernández, AV. 2010	Protocol of hospital management of craniocerebral trauma in the elderly ⁽²⁶⁾	Archivo médico de Camaguey
21. Betancourt, GM; Monné, DS; Hernández, AV; Fradera, AC. 2010	Results of the implementation of the Protocol for the hospital treatment of craniocerebral trauma in the elderly ⁽²⁷⁾	Mediciego
22. Betancourt, GM; Fradera, AC. 2010	Prognostic factors of craniocerebral trauma in the elderly ⁽²⁸⁾	Mediciego
23. Pereira, FB; Paula, AP; Barra, FR; Carneiro, JN; Leite, AF. 2010	Elderly men with osteoporosis are thinner, have a lower body mass index and lower stiffness index ⁽²⁹⁾	Revista Brasília Médica
24. Gawryszewski, VP. 2010	The importance of the falls on the same level among elderly people in the State of São Paulo ⁽³⁰⁾	Revista da Associação Médica Brasileira
25. Monteiro, CR; Faro, ACM 2010	Functional evaluation of elderly victim of fractures in hospital and at home ⁽³¹⁾	Revista da Escola de Enfermagem da USP
26. Lima, RS; Campos, MLP. 2011	Profile of the elderly trauma victim assisted in an urgent and emergency unit ⁽³²⁾	Revista da Escola de Enfermagem da USP

In order to achieve the objectives of this work, the following categories were created after analysis of the studies:

A. Risk factors for Bone Trauma or for Worse Prognoses

The elderly are more tending to iatrogenic, because they are often treated as young adults patients without considering their age, thereby increasing their susceptibility to iatrogenic effects and treatments recommended for their age.³ the falls are important causal factors to increase the level of dependency of the elderly, becoming a specific concern, because they may affect their functional capacity to be associated with anatomical changes attributed to the natural process of aging or diseases. The safety of the elderly should be cause for concern for the society, because the falls may have disastrous repercussions, since elderly people with traumas have loss

in their autonomy and increasing their dependency, reflecting on additional work and stress for the caregiver and family.⁵

The risk factors are associated with the occurrence of hospital infections. They are: the achievement of cholangiography, the presence of Diabetes Mellitus, chronic obstructive pulmonary disease (COPD), use of vesical catheterization, the presence of community infection and the use of mechanical ventilation.⁶ Of the several dominant pathologies in the age group over 50 years old, there is the CVA, considered as the main cause of hospitalizations, mortality and dysfunctionality, exceeding even heart disease and cancer. Among the consequences observed, there is the change in physical mobility, responsible particularly at increasing risk of falls. Although the event “fall” was not exclusive to the mentioned age group, it assumes more serious connotation, considering other health problems present ongoing and sequels more easily observed, usually associated with limitations on quality of life.⁷

The main risk factors for fractures in the elderly include decreasing hearing and peripheral vision, slowing reflexes and defense mechanisms, increasing bone fragility, medication use and a history of chronic diseases⁸. Accidents in the elderly are associated with extrinsic risk factors (environmental risks, presence of obstacles, inadequate illumination, lack of security in the bath, slippery floors, lack of handrails, stairs, inadequate furniture, use of inadequate footwear or assistive devices to walk, multimedications, poor condition of the appliances, gas leaks) and intrinsic (changes in walking and stability, vestibular dysfunction leading to dizziness and syncope, muscle weakness, vision and hearing changes, peripheral neuropathy, cognitive changes, orthostatic, advanced age, degenerative arthropathy, limitation for basic activities of daily life, depression, poor condition of teeth and smoking).⁹

The classic mechanism of sternal lesions is the direct impact of the sternum with the wheel of the car that slows down suddenly during a collision. Other mechanisms are the direct trauma of the sternum and the compression by injuries caused by hyperextension of the spine (tending more to these injuries women and people older than 50 years old).¹⁰

The late mortality rate is higher for the trauma victim elderly than for the young, due to the combination of the injury with the largest number of pre-existing diseases associated with (comorbidities) and the appearance of complications after trauma. Hospitalization can lead to complications, due to prolonged immobilization, increased risk of iatrogenic aggravations and post-traumatic stress disorder, characterized by insomnia, anxiety, depression, loss of confidence and panic syndrome. The factors that affect the prognosis of elderly patients with trauma are the age, number, type and severity of lesions, precocity in assistance, pre-hospital behavior and appropriate emergency medical transportation among others.¹²

The hospitalization of the elderly has increased spending for the health system and for the family (due to the greater length of stay to which these clients are usually submitted in comparison to young adults), also contributing to the increased risk of complications on prognosis.¹³ The hospitalization is considered at risk for the elderly,

because of the decreased functional capacity and changes in quality of life often irreversible.¹⁴

In the elderly group, the risk factors that presented a higher frequency in both genders were: history of falls (87.5%); age greater than or equal to 65 years old (70.8%); vision difficulties (95.8%); use of medications (75%); non-family room or little illuminated (62.5%) and absence of anti-slippery material (95.8%). One of the physiological changes more observed were the eyes and the hearing, common in the elderly, and added to the other aging related changes end by reducing the autonomy and independence of the individual, causing losses on their quality of life. The prevalence of falls associated statistically with advanced age, sedentary, self-perception of health (considered bad) and greater number of medications of continuous use. To establish a secure environment for the elderly, large expenses or radical changes within the family are not needed.¹⁵

The survey of risk factors that contribute to the occurrence of a traumatic event in the elderly has been highlighted as a target of scientific research, aiming to clarify healthcare professionals what features have to be observed in the assessment of their clients in the context of Gerontology, especially considering that accidents that lead to bone trauma in the elderly often entail the loss of quality of life, increase functional dependency, overload to caregivers, institutionalization and early death.¹⁶

The physiological changes related to age, make aging a heterogeneous and subjective experience. Thus, the interaction of personal, psychosocial and environmental factors in the course of life individually, delimiting the concept of pathological or physiological aging fragile.¹⁶ Regardless of whether it is expressed in acute or a chronic way, the disease presented by the elderly is multifactorial and hardly the result of a single cause, hence the complexity of nursing care dispensed to this clientele and the need for a specialized team for this service because, commonly, symptoms arise from acute form and can have body systems affected even before the emergence of symptoms.¹⁷

Only the gender (women suffer more falls than men), age, living alone, be taking five or more medicines and suffering mobility problems or musculoskeletal disorders or diabetes are significantly associated to have had injuries from falls. The sensory and communication disorders, cardiovascular diseases, cataracts and alcohol consumption had statistically significant effects.¹⁸

Physiological aging of the Nervous System put the elderly at risk of a trauma, among the brain injury trauma (BIT) is what causes dysfunction and death. In this way, the elderly are in the population group most susceptible to severe complications even after light CET.¹⁹ The highlighted risk factors for occurrence of complications due to a brain injury trauma (BIT) were chronic diseases history (being more incidents to hypertension and stable ischemic heart disease). The kind of trauma that indicated more risk of death was the severe BIT (BIT's mortality record was 95%).²⁰

Evaluating the evolution of the health care of patients with brain injury trauma (BIT), the main causes of surgeries were patients with severe BIT (100%), followed by

those with moderate BIT and injuries occupants of space (25%). All patients with severe or moderate BIT underwent computed tomography. The quality of the initial medical care, diagnosis and early treatment, the type of primary lesion and the severity of the trauma are factors that influence the appearance of postoperative complications.²¹ Advanced age, the history of cardiovascular disease, the severity of the trauma, the presence of intracranial traumatic hematomas, the development of complications and the surgical treatment increase significantly the risk of death.²²

To evaluate fracture risk in elderly men, the following risk factors were evaluated: family history of osteoporosis, current diagnosis of osteoporosis, presence of osteopenia, normality densitometric, smoking and alcoholism, bone mass, age and stature. The smokers, alcohol consumers, with low bone mass, 60 years old or more and short stature were described with increased risk of fracture²³

The falls occur as a sum of intrinsic and extrinsic risk factors and it is difficult to restrict a fall event to a single factor. The intrinsic factors are: muscle weakness, walking changes, cognitive deterioration and functional capacity to perform activities of daily living and instrumental activities of daily living as a factor associated with falls as well as the use of certain medications. Studies conducted in Brazil have shown, among the factors associated with advanced age, sedentary, self-perception of health as being bad, the greater number of medications referred to for continuous use, impaired vision, difficulty in performing daily activities.²⁴

There are several intrinsic factors that favor the trauma in the elderly: the losses arising from physiological decline together with the aging process, such as changes of cardiac, nervous, sensory and musculoskeletal system highlighting changes of vision, hearing, smell, walking, balance, motor coordination and reaction time. Also, the co-existence of systemic diseases and therefore the use of several drugs predisposes the elderly at risk of trauma. The use of medications such as antidepressants, psychotropic medication, anti-anxiety medication and hypnotics, sedatives, antihypertensives and diuretics, increase the propensity of the trauma through their cumulative side effects or interactions with other medicines or orthostatic hypotension. We cannot deny that among the elderly drinking alcohol in excess is a problem in many cases. Changes of behavior, balance and walking caused by this habit generate as a result a large number of injuries resulting from falls, trampling, collisions and assaults,²⁵ indirectly as risk factors for bone traumas.

Technological advances and improved quality of life allowed the elderly to develop activities such as driving, physical exercise and traveling. The elderly already retired continue to develop remunerated activities on the basis of financial need, despite the health problems. The article states that the improvement in life expectancy, added to the improvement of the quality of life of the elderly, has provided the maintenance of functional independence which makes it possible to carry out the activities of daily life with consequent increased exposure to risks of trauma.²⁶

B. Profile of the elderly Victim of Bone Trauma

Empirically, it can be said that as the higher the patient's age, the more risk he will be affected by some bone trauma. In this category, the objective was to validate this information, as well as assess other indicators, such as gender, occupation, marital status, etc., to identify what are the characteristics of this client. To meet the profile of patients who are targets of nursing care is essential in order to identify the intrinsic risk factors, potentially accidental injury determinants.¹⁶

The profile of the elderly submitted to iatrogenic is characterized of an age variant of the 61.6 to 98.3 years old (median of 70.8 years old).³ In one study, where they presented a predominance of female profile, being the average age among the elderly of 79.5 ± 9.6 . In marital status of the elderly, 64.5% were single and none married. In the number of children, 67.7% of the elderly had no children, which contributes to unfamiliar caregivers dependency. In the education level, 74.2% of the elderly have not completed elementary school, and 25.8% of them attended on average between one and six years of school. In professional occupation/income, most elderly people received retirement benefits and Social Security pension. There were not elderly practicing physical exercise and to evaluate the situation of health, 83.9% of the elderly reported presence of morbidity, and 34.6% had comorbidities, i.e. diseases that overlap, compromising the health status and functional capacity. The diseases mentioned by the elderly and/or their caregivers were: 37.5% for cardiovascular disease; 13.9% of psychiatric illnesses; and 48.6% of the elderly have other diseases. For these elderly the prevalence of partial dependence to perform the DLAs and IDLAs were indicated.⁴

As references to the profile of the elderly, there were diseases diagnosed by doctors and doing treatment, including hypertension, reported by 18 elderly (75.0%) being the most frequent in the group; osteoporosis; with three people with labyrinthitis, presented by an elderly and diabetes mellitus, also by one person. The average age ranged between 61 and 86 years old.⁵

Most of the hospitalizations of the elderly are female, a fact related to national statistics on which there is the predominance of women in the age groups above 60 years old. The incidence of depression in the elderly, in light, moderate or severe levels, depending on the scale of Yesavage, was 46%⁶. A predominance of males (52.9%), most of the patients lived without a partner (52.9%) was retired or pensioner (66.1%), while some (20.6%) did not have any current occupation. The median age was 61.6 years old (± 12.4), most patients had until 70 years old and education and household income variables showed asymmetric distribution (value $p < 0.05$).⁷

Evaluating the necropsies of the death elderly by brain injury trauma (BIT), from 71 deaths, 67% were receiving neurosurgical care, of which 89% have undergone Neurosurgery and 11% were accompanied in medical treatment. A predominance of males and between 60 and 79 years old were found. Car accidents and accidents at home were the etiological factors more incidents that led to the BIT. 90% of the

assessed one, suffered severe BIT, among which the major complications were severe brain contusion and a cerebral contusion association with acute subdural hematoma.⁸

One-third of the elderly living in the community suffer at least one fall per year and among them, half face the falls in a reiterated way. In the elderly over 80 years old, half suffer at least one fall per year. The prevalence of falls has been greater in women (since these have higher life expectancy). In nursing homes, 45% of the elderly have fallen at least once, while 20% of the elderly hospitalized for any reason fall during the period of hospitalization⁹

Among the studied population (sternal trauma victim), 77% were male, ages ranged between 48 and 82 years old, as an average of 56 years old (92% were more than 50 years old). In all cases, the mechanism of injury was closed trauma. In ten cases (77%) was due to car accidents. Among them, the direct trauma against the steering wheel of the vehicle was the most frequent cause (7 cases). In one patient the causal mechanism was the fall of little height with hyperextension of the spine and associated sternum-clavicular dislocation. The two remaining cases occurred as a result of the direct impact of the sternum for low height falls. Five patients (38.5%) suffered cardiac contusion.¹⁰

The group of patients who were involved in low energy mechanisms, as falling in the same height are more frequent in the elderly, with a peak of 60 to 70 years old, female (65%), with traces of fracture less unstable, without associated traumas.¹¹ Most elderly were married, male and the main trauma suffered was the fall.¹² Of the total hospitalizations evaluated, 60.5% were female and the highest percentage of total ages between men and women was 70 to 79 years old (41.8%). The majority of the population under study had white skin color (59.1%), being "retired" the most prevalent (32.1%). In relation to marital status, among women predominated the "widows" (23.5%) and among men the "married" (19.3%).¹³

An article¹⁵ cites 21 (75%) were male, 14 (50%) were aged between 60 and 69 years old, 20 (71.4%) were married, 21 (75%) were Catholic, 12 (42.9%) presented one to three years of study 19 (67.8%) had income up to two salaries. The elderly reported two or more illnesses 21 (75.0%) being the most prevalent cardiovascular disease 18 (64.2%) and 7 (25.0%) respiratory.¹⁴ Being old, female, user of antihypertensive medications and present deficits arising from disabling events such as cerebrovascular accident. Most of the elderly presented low education level, because they had low income per capita, which was below the patient's individual income. The article identifies as the concomitant presence of neurological diseases, such as CVA, increasing the risk of falls. The elderly faced on average more than one episode of CVA, with a range of more than two years since the last event.

The profile of the elderly in the sample was 113 community elderly of both genders, 76 selected basic network, and 37 in average service complexity, 13.27% identified such elderly as fragile, being more incident in women, in the older one (85 years old or more) and with lower income, lower educational level and greater number of diseases. The group most susceptible and fragile is composed by women and the

elderly with lack of social and financial resources.¹⁶ It was observed a higher incidence of injuries from falls in older women: 17.3% of those aged 65-74 years old, 21.6% of 75-84 years old and with 24.6% of those over 85 years old.¹⁸

In order to describe a protocol of care to lower brain injury trauma cases in the elderly, there was a male predominance, of the group of 60 to 79 years old and 61% of the patients suffering any chronic disease. The light BIT was the most frequent variety and the chronic subdural hematoma was the complication of greater incidence. No deaths were verified between the sample.¹⁹ There was a predominance of males and of groups of 60 to 79 years old, and 73% of patients had a chronic disease. Lower brain injury trauma (BIT) was the most frequent variety. The chronic subdural hematoma was the main cause of surgery. The severe BIT had a high mortality with a higher incidence of brain injury accompanied by cerebral edema.²⁰

33.7% of the elderly were submitted to surgical treatment. With the use of limited craniectomy 40% of patients have survived. Of the 41 patients with light BIT, 78% were referred to outpatient care, without realization of computerized axial tomography.²¹ The death risk as a result of a brain injury trauma (BIT) in patients older than 65 years old is 1.95 times greater than in those under 65 years old, while in the elderly older than 80 years old is 5.62 times higher than in under ages. There was 2.2 times greater risk of dying by BIT in patients with cardiovascular diseases. Most of the deaths originated from traffic accidents. The risk of death for the elderly with moderate or severe BIT is 33.6 times greater than in those with light BIT, which is higher risk in 441 times when compared to other ways of trauma.²²

In the evaluation of the elderly male, they are at increased risk of trauma to those with lower body mass index (less weight), diagnosed with osteoporosis by densitometry and osteopenic.²³ Results showed that, compared to men, women were 1.55 times significantly more likely to be attended by a fall than by other external causes. Compared to the 60 to 69 years old, individuals in the range of 70 to 79 years old were 2.10 times and individuals of 80 years old and older were 2.26 times significantly more likely to be attended by a fall than by other external causes. However, the test did not reveal any statistically significant difference as to gender or age group when compared individuals who have suffered falls on the same level and other types of fall.²⁴

The sample was composed of elderly people with an average age of 75.47 years old, 16 men and 18 women. The majority (82.4%) was of white ethnicity. When questioned about the leisure activity and realization of physical activity before the trauma, 50% of them do not have any activity, and only 11.8% of them reported to the regular practice of physical activity being the walk the only activity mentioned. The fracture of femur represented 67.6% of fractures, particularly fractures of proximal third of the femur, especially the intertrochanteric fractures of femur's lap and respectively. The fall was the main mechanism responsible for trauma fractures in the elderly (88.2%). Their home for the elderly was the main scene of the falls, followed by public environment.²⁵

Among the comorbidities, hypertension was the most prevalent (n=54). It is important to note that cardiovascular system is the first one that manifests itself inappropriately through the trauma. Falls from same height was presented as the predominant cause of trauma in the elderly. The traumas by vehicles are the main cause of death in the geriatric population between 64 and 74 years, elderly pedestrians represent more than 20% of the fatalities. In the case of trampling and elderly victims in pedestrian condition, we can be considered that the limitations of the age (more restricted mobility, lack of attention, visual and hearing difficulties among others) and the wide avenues do not always allow them to complete the crossing at the time scheduled by the road lights.²⁶

C. Performance of nursing in Assistance to Traumatized Clients.

It becomes increasingly incisive the desire to understand the Systematization of Nursing Care (SNC) from new references, capable of broadening the vision field beyond the prescriptive and standards formulas and, above all, in addition to the formally established as the guiding models of a human-centric assistance.⁸ Formal records of assistance, developed in a systematized and optimized way, provide visibility and guarantee the continuity of care in a safe, integrated and qualified manner.²³

Due to the increase of elderly population in recent decades, nursing procedures must be adapted to new customers who need their care or guidance. Inter-relate with the action of nursing care, care and technology, is to understand it, not as a reductionist practice on care action and limited, but, based on the perception of the human being, the elderly, as a person with their values, beliefs and experiences.²⁴

There is a need for changes to accelerate the process of work and optimize the quality of actions in the care and education. The effective application of the nursing process leads to improvement in the quality of health care and encourages the construction of theoretical and scientific knowledge based on best clinical practice. Electronic records can provide a significant contribution to the successful implementation of the nursing process, particularly if all phases are connected.²

The innovative methodology based on cost accounting comes associating to the use of SCP to relative value unit to improve the accuracy of the data. Thus, it is identified the complexity of patient care taking into consideration the average of assistance time, enabling greater appropriateness of time to each patient and the real cost.³

It is important for any institution to encourage notification of iatrogenesis, without punishment of the professional, but having a quality continuing education, enhancing technical and preventive measures and information in these situations. It is interesting also the creation of a nurse who is specialized in the elderly care for maintenance of aggravations and reduction of risks that they may be submitted when hospitalized.⁴

It is emphasized the importance of the role of the nurse in long-stay Institutions for elderly developing actions related to health promotion, protection, rehabilitation and health education, promoting the autonomy of the elderly in a position of dependence and a better quality life. Developing educational actions aimed at empowering caregivers for the development of their activities with the elderly and the implementation of local health and social policies consistent with the reality of ILPIs. Building a support network (collective action) to families and caregivers of the elderly contributing in this way to the permanence of the elderly at home.⁴

Nursing should act with preventive measures so that these statistics may be modified, detecting the physical and environmental risk factors, in order to modify them or adapt them, thus decreasing the degree of susceptibility to this falls in the elderly population. It is necessary to guide the elderly to adopt healthy attitudes that can prevent falls. Some of these attitudes can be listed as: realization of regular physical activity, queries for evaluation of blood pressure levels and use of medicines and care with the environment in which the elderly lives. The nurse, as a member of the health team should develop, improve and socialize clinical care and strategies to better service the bio-psychosocial needs of this age group, which the healthy ageing should not be a part only of the concerns of the health sector; but it should be included as a priority in the social agenda of the country.⁵

It was noticed that the physical examination performed by nurses in elderly hospitalized has no specific targeting, which suggests a lack of geriatric focus during the period of academic training. Most of the subjects reported motivation to conduct the physical examination, being that the main justification for the non-motivation was the overload of work. According to the nurses, physical examination subsidizes a patient and individualized assistance emphasizing the individual needs.⁶

A global proposal falls prevention also includes the restructuring of residences as another alternative. Interventions should help users of health services and their caregivers, mainly, to understand how to reduce the probability of a fall, being invaluable to the patient's residence to be differentiated, in order to provide necessary safety and minimize the risk of falls and their possible undesirable consequences.⁷

At the community level, health promotion strategies and accident prevention are effective to minimize the effects of trauma as a result of falls. Education and structural changes should be recommended by the nursing staff in the basic care, seeking to intervene and modify all external risk factors, as well as promoting security measures at home and in recreational environments. The nurse should also promote safe living habits and early detect all the people who are at potential risk of suffering an accidental injury, perform home visits, health education with emphasis on self-care, as well as developing risk profiles individually and collective. The anamnesis must refer to the systematic search of the intrinsic risk factors for accidental injury. On physical examination, a cardiovascular assessment should be performed (seeking puffs carotid, arrhythmias, etc), a complete neurological exam (with emphasis on cognition, proprioception, sensitivity, muscle strength, walking evaluation, balance, hearing and

vision), a musculoskeletal examination centered on the joints and a careful evaluation of the skin. It is also a nursing care: assessing the environment where the patient lives, as well as the family and social support available.⁹

Nursing can act on assistance to the sternal fracture through the administration of medications (analgesics, muscle relaxants), physiotherapy and respiratory therapy, prolonged stimulus to bedrest (leading to internal fixation in patients with severe pain or large deformities), maintaining a proper oxemia (with Venturi masks) and secretions administration.¹⁰

The prevention of these fractures in this group must seek the prevention of falls, through muscle strengthening programs for the elderly, ophthalmological fixes, safe houses projects and the prevention and treatment of osteoporosis in all its stages, feeding, exercise, hormone replacement, calcium supplements and vitamins, specific medications.¹¹

Seeking a quality assistance to institutionalized elderly, we need to find new elements and practices for care in gerontological nursing. For nursing in particular, the promotion and prevention of diseases to health it is necessary and appropriate for the context of this age group including physiological limitations that arise at this stage.¹³ The complexity of nursing care must be seized and discussed from various areas of care, in order to substantiate the nursing care to health of the elderly in the different levels of care. The challenge is to get the elderly to remain as independent and practicing activities that promote their quality of life within their functional and cognitive limits.¹⁴

Besides the nursing consultation, time possible to diagnose and identify the risk factors of each patient, the nurse should pay full attention to the elderly by providing home care when needed and permanent education activities. It is important to establish a plan of actions with a view to guiding the elderly, family and/or caregiver about the risk factors of falling found and encourage adaptation of the environment so that it becomes safe and comfortable, especially for those with greater physical impairment, which present difficulty in walking and need to use auxiliary devices.¹⁵

The action happens through the direction of care and treatments for each individual, as well as establishing unified protocols for assessing the elderly in order to improve the assistance provided. It is the responsibility of nurses the prevention of fragility, through strategies of care involved in prevention, in addition to the health education process.¹⁶

The syndromes can be wrongly considered as normal changes of aging, increasing therefore the chronicity of the elderly, hence the need to investigate nursing diagnoses associated with this phenomenon, since we consider the systematization of nursing care a goal to individualized, holistic process, planned, continuous and evaluated so as to make the specific and integral service to the elderly client.¹⁷

The nursing staff can act identifying patients who are exposed to a greater risk to suffer falls, developing preventive interventions affecting them.¹⁸ Nursing can act in the cases discussed in this study to highlight the importance of an assessment leading to

early diagnosis and appropriate treatment of intracranial hematomas, acting also on the observation of patients during hospitalization.¹⁹

The brain injury trauma (BIT) in the elderly has characteristics that identify and should be considered when elaborating and putting into practice treatment protocols to improve the medical care which is dedicated to this group of clients. These protocols are intended to improve the quality of care for the elderly. It should be noted that the BIT management should be multidisciplinary, being essential to improve the techniques and procedures, increasing the care during surgery (especially in emergency surgery, since it is associated with a greater number of complications). It is considered irreplaceable the correct evaluation of the geriatric patient (prior to surgery), in order that the patient arrives in the best physical condition to the surgical procedure, and also to determine or diagnose sub-clinical diseases that increase surgical risk.²⁰

The care to brain injury trauma (BIT), regardless of its severity, is reserved almost in their entirety to the neurosurgeons, preventing the use of intersectoral approach in hospitals, which is necessary to ensure adequate assistance to these sick people.²¹ The performance of nursing can be identified, as they highlight the importance of multidisciplinary assessment and individual cases, to decide the best treatment option which the patient must be referred in order to not only maintain adequate vital signs, but also that there is quality of life.²²

It is important to know that no medication treatment is as efficient as the one held before the first fracture, so recognize the sooner the patients at greater risk of suffering fractures, instituting preventive measures and forward to care treatment are referred to as the responsibility of the entire team, including health nursing.²³

Conducting group physical activities, such as Tai Chi Chuan, individually prescribed exercises to perform at home, implementation of prescription medication programs geared toward the basic health care, performing cataract surgery can reduce the risk of falls. That is, some of the physiological factors related to aging and which contribute to the occurrence of these events, such as the decline of visual function and musculoskeletal functions can be compensated with interventions. It is also highly recommended routine health examination for this group, tests that can identify risk factors for falls, such as hearing and visual, osteoporosis, cognitive, emotional and in mobility difficulties. It is expected that these results encourage health professionals to perform service for this group, in addition to the incorporation of practices aimed at the identification of conditions that are configured in risk factors, in the correction of which is amenable to treatment and guidance to patients and their families.²⁴

The actions of health professionals and the public policies should include not only interventionist measures, but also including preventive control of the environment of the elderly so that it will be allowed its free and safe movement, control of basic pathology instruction and family caregivers, development and encouraging participation of the elderly in physical activity programs. We believe in the need for training of health professionals prepared to evaluate the elderly in their functional capacity, meet their needs and develop plans to minimize disabilities.²⁵

The prevention of falls can be made with actions that involve the reduction of architectural barriers, both home and public and even preventive interventions as in biopsychosocial sphere as the improvement in visual acuity in low bone mineral density, low physical activity, muscle weakness and even acting in an attempt to lessen the fear of falling in elderly person. The closest approach and understanding of the needs of the elderly can provide the professionals, specifically nurses, the implementation of gerontologic actions to prevent trampling with education in traffic and greater control at the traffic authorities of public roads. Educative actions can be implemented in collective environments of the basic health care, as waiting rooms and elderly groups, among others, covering topics such as prevention of falls and traffic education. In falls aspect, environmental adaptations and stimulating physical activity geared towards the strengthening of muscles, increasing flexibility and improves muscle balance and walking, systematic follow-up of the use of medicines and of signs and symptoms, are measures that can contribute to reducing the falls.²⁶

CONCLUSION

Through the survey, it can be reflected that there is a significant number of published articles referencing the thematic around the elderly. It is clear in studies the growing percentage of elderly people in our population and how this age group has been affected in various ways by some sort of trauma.

It was emphasized the comorbidities and the chronic non-communicable diseases in this scenario, where in parts, are responsible for the progression of decreased vital capacity of the human being. Many elderly people have suffered or are liable to suffer some kind of trauma, and as the most cited by the studies we observed falls. It was stressed the continuing education for professionals who undertake the care of the elderly adult, where the interdisciplinary team is necessary for an adequate and effective assistance.

In this context, the aim is the prevention of diseases and the rehabilitation of the individual who is at risk. In this respect, it is important the autonomy and cognition of the elderly as a way to stimulate it and insert it in their social context. It is observed that it is of the utmost importance to participation in family life, not giving a meaning of play estate to the home environment.

The hospitalizations were hugely significant for the high rate of addiction and depression. For some families this environment becomes a reliable medium to keep this old man in intensive care to the vast majority of patients, involves partial loss of the daily activities carried out, in addition to the low self-esteem and gradual loss of independence.

It can be concluded that the profile of the elderly affected by injuries varies according the sites addressed in studies: suffering traumas more men or women, primarily above 80 years old, with neuro-motor weakness, in use of multiple medications and base diseases associated (mainly hypertension and heart diseases). Nursing care for the elderly is still traumatized by the disabled to the extent that there is a significant incidence of iatrogenic and problems in the application of systematic assistance.

Thus, it is believed that the objective has been achieved, as well as it is highlighted a great relevance to health education not only to health-care professionals, but also to family members and caregivers for the elderly, to minimize the risks to which they are subjected as a result of their underlying pathologies or even their stage of senility. In this way, reducing environmental sources that may cause damage to the elderly and stimulate them physically and mentally is of paramount importance.

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