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ORIGINAL ARTICLE

EXTERNAL CAUSES INVOLVING ELDERLY PEOPLE SERVED IN A FIRST-AID POST

CAUSAS EXTERNAS ENVOLVENDO IDOSOS ATENDIDOS EM UM PRONTO SOCORRO CAUSAS EXTERNAS ENVOLVIENDO ANCIANOS ATENDIDOS EN UN PRONTO SOCORRO

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ABSTRACT

Objective: to identify the more frequent external causes in elderly patients served in the First-Aid Service. **Method:** it is a quantitative study with a descriptive approach, in which we made use of secondary data collected from the medical charts of the First-Aid Service of the city Pelotas/RS/Brazil, from August 2008 to July 2009. The data analysis was performed in the Excel 2007 program. The research project was approved by the Ethics Committee, under the Protocol nº 50/2010. **RESULTS:** we have identified 504 elderly people who were victims of morbidity due to external causes in the surveyed period. Of these, 299 were females and 205 were males. In this study, falls were highlighted, accounting for 48% of cases, followed by traffic-related accidents, with 10%. **Conclusion:** it is believed in the need for better (re) structuring of health services and programs so that they can respond to the emerging demands of this new epidemiological profile of the country. **Descriptors:** External Causes; Elderly People; Nursing.

RESUMO

Objetivo: identificar as causas externas mais frequentes em idosos atendidos no Pronto Socorro. **Método:** estudo quantitativo, de abordagem descritiva, no qual foram utilizados dados secundários coletados junto às fichas de atendimento do Pronto Socorro de Pelotas/RS/Brasil, de agosto de 2008 a julho de 2009. A análise dos dados foi realizada no programa Excel 2007. O projeto de pesquisa foi aprovado pelo Comitê de Ética, sob o Protocolo nº 50/2010. **Resultados:** foram identificados 504 idosos que sofreram morbidade por causa externa no período selecionado. Destes, 299 eram mulheres e 205 eram homens. Neste estudo, ganharam destaque as quedas, representando 48% dos casos, seguidas pelos acidentes de trânsito, com 10%. **Conclusão:** acredita-se na necessidade de uma melhor (re) estruturação dos serviços e programas de saúde para que possam responder as demandas emergentes desse novo perfil epidemiológico do país. **Descritores:** Causas Externas; Idoso; Enfermagem.

RESUMEN

Objetivo: identificar las causas externas más frecuentes en ancianos atendidos en Pronto Socorro. **Metodología:** estudio cuantitativo, de abordaje descriptiva, en el cual fueron utilizados datos secundarios colectados junto a las fichas de atendimento del Pronto Socorro de Pelotas/RS/Brasil, de agosto de 2008 a julio de 2009. El análisis de los datos fue realizado en el Programa Excel 2007. El proyecto de investigación fue aprobado por el Comité de Ética, protocolo nº 50/2010. **Resultados:** fueron identificados 504 ancianos que sufrieron morbilidad por causa externa en el período seleccionado. De estos, 299 eran mujeres y 205 hombres. En este estudio ganaron destaque las caídas, representando 48%, seguidas por los accidentes de tránsito con 10%. **Conclusión:** se resalta una necesidad de una mejor (re)estructuración de los servicios y programas de salud para que puedan responder a las demandas emergentes de ese nuevo perfil epidemiológico del país. **Descriptores:** Causas Externas; Ancianos; Enfermería.

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INTRODUCTION

The increased number of accidents and violent acts in Brazil, factors considered as external causes, has reflected in the organization of the health system, due to the rising costs with hospital admissions and treatment procedures. In Brazil, the proportion of hospitalizations for external causes progressively increased, from 5% in 1998 to 6%, in 2005, as well as the proportion of expenses, which rose from 6% to 8%, constituting a major challenge for health policies and services of the country.¹

Accidents and violence forms constitute a set of health damages that might or might not induce the victim to death, in which the said accidental causes are included - generated by traffic movement, work, falls, poisoning, drowning and other accident types - as well as the intentional causes (aggressions and self-inflicted injuries). This set of damages is presented in the 10th International Classification of Diseases (ICD-10) under the name of external causes.²

Although the main victims of external causes are young adults, this event has been also gaining prominence in the elderly population, especially in large urban centers, since that population aging is a social phenomenon. Therefore, advanced age, added to chronic diseases, can make the elderly subject more vulnerable in relation to dangers inside and outside the home environment. Accordingly, external causes, especially accidents, involving elderly subjects can produce long hospital stays and temporary or permanent sequels. Furthermore, at least one caregiver family member is removed from active economic activities, entailing high costs with health care to the Brazilian Unified Health System (SUS) and the society itself, and also contributes to the decline of functional ability in the elderly people, by interfering in the healthy aging.³

It should be highlighted that the city of Pelotas has 14% of its 328.275 inhabitants belonging to age group of 60 years or over, being that it is above the average of the Rio Grande do Sul State (RS), which has a rate of 12,2%, and above the Brazilian index, which shows that 9,5% are aged 60 years or older. ⁴ Based on these statements, the present study aims at identifying the more frequent external causes in elderly patients in the First-Aid Service of Pelotas/RS/Brazil.

This study should be considered of utmost importance, as it might serve as a basis for health care professionals working in all levels

of assistance of the SUS and of the society at large, generating knowledge about more frequent external causes in elderly patients in the First-Aid Service of the city of Pelotas, thereby, helping with the health promotion and prevention of these hazards, aiming at improving the conditions and the quality of life in this age group.

OBJECTIVE

- To identify the more frequent external causes in elderly patients served in the First-Aid Service.

METHOD

This Article was elaborated from the Dissertation << *Elderly people victims of accidents and violence forms served in a First-Aid Service in the Brazilian South* >>, presented to the Post- Graduation Program in Nursing of the Faculty of Nursing at the Federal University of Pelotas, Brazil, 2010.

The city of Pelotas has a First-Aid Service that serves the population of its macro-region, providing solely assistance by means of the Brazilian Unified Health System. This service serves a daily average of 206 patients, according to data obtained from the medical charts (MC). In June 2008, the unit totaled 6.186 attendances, of which 1.153 were related to elderly patients (18%) and, of these, 171 were attended due to external causes (14%).

It is a quantitative study with a descriptive approach, in which we made use of secondary data collected from the medical charts (MC) of the First-Aid Service of the city of Pelotas/RS/Brazil. The selected charts were those of elderly aged 60 or over, living in the city or not, who had received the first attendance in this institution due to external cause, as chapters XIX and XX of the ICD-10, in the period from August 2008 to July 2009. For data collection, we have selected charts that represented a week of each month in an alternate manner: starting from the fourth week of August 2008, the first week of September, the second week of October and so on in a period of 12 months.

The variable of interest for this study was the external cause in elderly patients served in the First-Aid Service of the city of Pelotas. The occurrence of these accidents was described according to gender, age (organized into categories 60-69, 70-79 and 80 or over), week day in which the event took place and the month (categorized by quarters - jan/feb/mar; april/may/june; july/aug/sep

and oct/nov/dec). The data analysis was performed in the Excel 2007 program.

The project was approved by the Ethics Committee of the Faculty of Nursing at the UFPel, under the Protocol nº 50/2010. As to the ethical issues, they have obeyed the regulatory standards and guidelines for researches involving human beings, in accordance with the Resolution 196/96 of the Brazilian National Health Council.⁵

RESULTS

We have identified, through medical charts, 504 elderly people who suffered from external causes in the surveyed period. Of these, 299 were females and 205 were males.

Table 1 shows the distribution of types of external causes in elderly patients in the First-Aid Service of the city of Pelotas.

Table 1. Distribution of types of external causes in elderly patients served in the First-Aid Service of Pelotas/RS, Brazil, in the period from 2008 to 2009.

Tipos de Causas Externas	n	%
Fall	243	48,2
Traffic-related accident	52	10,3
Accident involving animals	42	8,3
Lower limbs trauma	41	8,1
Upper limbs trauma	30	6,0
Traumatic brain injury	23	4,6
Unspecified cutting	21	4,1
Physical aggression	18	3,6
Thoracic trauma	11	2,2
Other causes	23	4,6
Total	504	100%

It is observed in Table 1 that falls were the external cause that more affected elderly people of both genders, being that they were described in the charts as follows: fall, fall from the height itself, fall out of bed, fall from stairs and fall on the ground, followed by traffic-related accidents, which were

consisted of trampling, collision between cars or between a car and a bicycle. Moreover, accidents involving animals such as dogs and insects were predominant.

Figure 1 shows the gender-related distribution the main external causes that affected the elderly people.

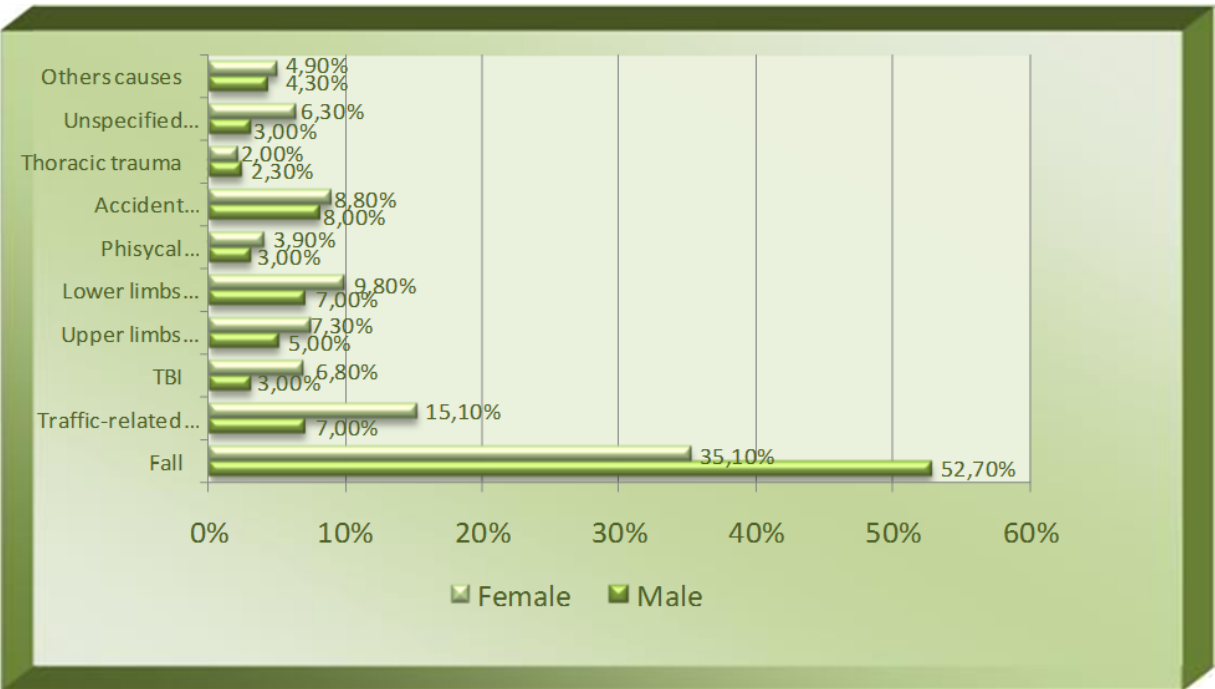


Figure 1. Gender-related distribution of the main external causes that affected the elderly patients in the First-Aid Service of Pelotas, in the period from 2008 to 2009 (n = 205 males and 299 females).

It is perceived in this figure that falls were the most prevalent accidents in the elderly people. Such accidents were more frequent in women than in men, being that the latter were those who more suffered from traffic-related accidents.

Table 2 shows the distribution of the elderly patients served in the First-Aid Service due to falls, according to gender, age, seasonality and week days.

Table 2. Distribution of elderly patients served in the First-Aid Service due to falls, according to gender, age, seasonality and week days, Pelotas/RS, Brazil, in the period from 2008 to 2009.

Age (years)	Men	Falls %	Women n	Falls %
60-69 years	130	25,4	114	46,5
70-79 years	53	41,5	109	58,7
80 or over	22	77,3	76	71,1
Year's quarter				
Jan-Mar	22	29,7	39	57,4
Apr-Jun	15	35,7	49	64,5
Jul-Sep	20	40,0	43	56,6
Oct-Dec	15	38,5	40	50,6
Week days				
Monday	10	37,0	41	68,3
Tuesday	10	37,0	19	46,3
Wednesday	13	46,4	17	42,5
Thursday	13	40,6	26	70,3
Friday	08	23,5	18	60,0
Saturday	09	33,3	28	53,8
Sunday	09	30,0	22	56,4

In this table, it is observed that there is a larger proportion of older women affected by falls, being that the age group with the highest frequency is the one from 60 to 69 years. It should be emphasized that as the age of both sexes increases, the percentage difference decreases.

Regarding the year's quarter in which falls took place, in the case of males, they were more frequent in the quarter corresponding to the period from July to September, while, in women, the falls were more frequent in the quarter related to the period from April to June.

It should be also observed that, in both genders, falls were uniformly distributed in the week days, but they were more frequent in working days, particularly on Wednesdays and Thursdays.

DISCUSSION

Accidents due to external causes in the elderly population are configured as a serious public health problem, because, in most cases, generate injuries that will further aggravate the health status of the elderly subject, affecting both its quality of life and of its family members, in addition to provoke higher costs for the area of social security.⁶ Among the external causes involving elderly people, falls are highlighted in this research, accounting for 48% of cases. In a study conducted in the city of Ribeirão Preto, São Paulo State, with 110 elderly subjects, it was identified that 66% had suffered some accident type and, of these, 58% were falls.⁶ Just like in a survey conducted in Turkey, where the percentage of falls was of 69,6%.⁷

It is noteworthy to stress that falls occupy 10% of hospital emergencies and 6% of urgent hospital admissions in elderly subjects.⁸ In a survey held in 2006, falls are identified as the

main causes of injuries (26%), highlighting that these events might be associated with extrinsic factors, such as the topography of the region or the living conditions, but might also be related to mistreatments and aggressions and use of three or more medicinal drugs.⁹

It should be highlighted that the occurrence of falls might even be associated to intrinsic factors, such as increased age, some biological factors intrinsic to the aging process and the presence of chronic diseases, making this group potentially more susceptible, which is an evident fact, given that more a third of people aged 65 and over suffer from falls every year.⁸ It should be enlightened that the structural and functional changes, as well as the coexistence of chronic diseases, predispose the elderly subjects to several accidents and these are initially presented in a more critical way, thus requiring hospital admission with greater frequency.¹⁰

In a study on the characterization of the victims of accidents and violence forms, served in a first-aid service in the Mato Grosso State, it became clear that, in the elderly population, falls accounted for 72,4% of all accidents attended in that institution.¹¹ A study conducted in China, in 2003, with 16.899 elderly residents in four communities, indicated that the incidence of injuries from accidents and violence forms was of 16% and, of these, 5% were due to falls, being that they were the main causes.¹²

In addition to falls, traffic-related accidents emerge as the second cause in relation to external causes in the First-Aid Service of Pelotas, taking place with greater frequency among males, which is a fact that goes straight to another study, conducted in a first-aid service of the city of Pouso Alegre,

Minas Gerais State (2007), where traffic-related accidents were the second leading cause of hospital admissions due to external causes among the elderly population served in the above mentioned service.¹³ Another point to be highlighted was related to the accidents involving animals, representing 8% of accidents, which was also found in a survey conducted in Porto Alegre/RS, with 1.594 individuals who suffered from external cause, where accidents involving animals accounted for 21% of cases related to elderly people.⁹

The present study showed that the majority of elderly patients who suffered from external cause and received their care procedures in the first-aid service at stake were females (59,32%), which resembles a nationwide study on hospital admissions and deaths from external causes, which has identified women as the main elderly victims who were admitted, representing 54% of cases.¹⁴

In a study on vulnerability to accidents involving elderly subjects, the data related to age and gender showed that, after the age of 60, women are more vulnerable to accidents, accounting for 64% of occurrences⁹, which was also found in this study, with a percentage of 59%. This finding might be related to the fact that women achieve more advanced ages¹⁵, use more medicinal drugs, such as psychotropic substances, and present decreased power of seizure.¹⁶

Concerning the aspects of seasonality, there seems to be a rise of occurrence of falls in the colder months. Moreover, in relation to the distribution of falls among the week days, it became clear that these events took place with greater frequency on working days and, in most cases, on Wednesdays and Thursdays, while in the study conducted in the city of Pouso Alegre, Minas Gerais, in 2007, most injuries took place on Fridays, Saturdays and Sundays.^{13,17}

This study shows as a positive aspect the fact of adding new knowledge about this issue, still little explored in the literature. Furthermore, it becomes more relevant when one thinks of the demographic and epidemiological transition of our country. In this context, this study meets the principles and guidelines of the SUS in relation to the preservation of the autonomy of individuals and the use of epidemiological data in establishing priorities, allocating resources and guiding health care programs.

As a limitation, it should be considered the non-computerization of the Statistical and Medical File System, which might cause loss of

information that could be more readily available, besides generating increased wear to the researcher.

CONCLUSION

External causes should be issues of concern to health care professionals, governments, society, families and the elderly itself, in view of the growing number of elderly subject affected by these events, especially by falls, which might cause significant disabilities that can lead them to death. In addition, such events can represent increased financial demand of elderly people and of their relatives, thereby consolidating as another complicating factor mainly for those that have a lower socioeconomic status and still overloading health care services and the State.

By considering that falls were the most common causes of accidents in the elderly people and that it is possible to propose preventive measures for this population group that tends to be increased in coming years, it is believed in the need for better (re) structuring of health services and programs so that they can respond to the emerging demands of this new epidemiological profile of the country. It should be also highlighted the need for the completion of further studies that discuss this issue and contribute to maintenance of the quality of life of elderly patients affected by accidents, or that aim at preventing these events.

REFERENCES

1. Brasil. Ministério da Saúde. Departamento de Informática do SUS. Movimento mensal de internação hospitalar [cited 2009 Apr 03]. Available from: <http://msbbs.datasus.gov.br/public/default.htm>.
2. Brasil. Ministério da Saúde. Política nacional de redução da morbimortalidade por acidentes e violências: Portaria MS/GM nº 737 de 16 de maio de 2001 publicada no Diário Oficial da União N° 96 de 18 de maio de 2001. Brasília; 2001.
3. Paes PFA. Limites e possibilidades no cotidiano do familiar que cuida do idoso com Alzheimer no ambiente domiciliar. Esc Anna Nery Rev Enferm. 2005; 9(2):192-8.
4. Instituto Brasileiro de Geografia E Estatística. IBGE. Dados do Censo Sinopse 2010. Rio de Janeiro: IBGE; 2010. [cited 2011 Aug 25]. Available from: <http://www.ibge.gov.br/cidadesat/cartograma/mapa>.

5. Brasil. Ministério da Saúde. Resolução do Conselho Nacional de Saúde nº196/96. Brasília; 1996.
6. Lange C. Acidentes domésticos em idosos com diagnóstico de demência atendidos em um ambulatório de Ribeirão Preto, SP, 2005 [dissertação]. Ribeirão Preto(SP): Escola de Enfermagem de Ribeirão Preto, USP; 2005.
7. Acimis NM, Mas N, Yazici AC, Gocmen L, Isik T, Mas MR. Accidents of the elderly living Kocaeli Region (Turkey). Holanda. Arch Gerontol Geriatr. 2009 Sep/Oct;49(2):220-3.
8. 8.GaiJ. Fatores Associados a quedas em mulheres idosas residentes na comunidade [dissertação]. Brasília: Programa de pós Graduação em Gerontologia, Universidade Católica de Brasília; 2008.
9. Leal SML, Lopes MJM. Vulnerabilidade à Mortalidade por Causas Externas entre mulheres com 60 anos e mais, usuárias da atenção básica de saúde. Cienc Cuid e Saúde. 2006; 5(3):[about 5 p.].
10. Souza JAG, Iglesias ACRG. Trauma no idoso. Ver da Associação Médica Brasileira on line [internet]. 2002 Jan/Mar [cited 2009 July 27];48(1):[about 5 p.]. Available from: http://www.portalbvsenf.eerp.usp.br/scielo.php?script=sci_arttext&pid=S0104-35522006000400007&in.
11. Marchese V S, Scatena JHG, Ignotti E. Caracterização das vítimas de acidentes e violências atendidas em serviço de emergência. Município de Alta Floresta, MT (Brasil). Rev bras Epidemiol. 2008;11(4): 648-59.
12. Yu M, Cong LM, Xu LR, Xia ZC, Han CX, Ma Y, et al. A cross-sectional study on injuries in residents at the community level of Zhejiang. Zhonghua Liu Xing Bing Xue Za Zhi [Internet]. 2003 Aug [cited 2011 Aug 25];24(8):681-3. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/14521787>
13. Filho M J, M H PM. Características da morbidade por causas externas em serviço de urgência. Rev bras epidemiol [Internet]. 2007 Dec [cited 2009 Sept 22];10(4):579-91. Available from: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1415-790X2007000400016&lng=en. doi: 10.1590/S1415-790X2007000400016.
14. Gawryszewski VP, Jorge M H P de, Koisumi M S. Mortes e internações por causas externas entre os idosos no Brasil: o desafio de integrar a saúde coletiva e atenção individual. Rev Ass Med Bras. 2004; 50(1):97-103.
15. Alessandra R C de M, Danyelle S A, Fernando J G da S J, Francisca
16. Cecília V R, Patrícia M G de C. Evaluation of daily life activities in primary care after falls, in elderly persons. J Nurs UFPE on line 2012 Mar[cited 2011 Aug 25];6(3):619-26. Available from: <http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/2289>
17. Tinetti ME. Preventing falls in elderly persons. New England Journal Of Medicine 2003, v.348, p. 42-49.
18. Silveira R, Rodrigues RAP, Junior MLC. Idosos que foram vítimas de acidente no município de Ribeirão Preto-SP em 1998. Rev Latino-Am Enfermagem. 2002 Nov/ Dec; 10(6):765-71.

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