Hospitalizations and Deaths from External Causes in Elderly Residents in The Municipality of Belém-PA, Brazil

ABSTRACT

Objetives: To investigate mortality and hospitalization due to external causes in elderly residents in the municipality of Belém - PA, between 2019 and 2023.
Study design:A cross-sectional, descriptive study with a quantitative approach based on secondary data.
Methodology: The study was carried out in the municipality of Belém, which is located in the state of Pará, in the northern region of the country, and has an area of 1,059.466 km². It has a population of 1,506,420 inhabitants, 53.3% of whom are women and 46.7% men. The study is based on secondary data available from the Hospital Information System (SIH/SUS) and the Mortality Information System (SIM/SUS) of the Unified Health System, provided by the Department of Informatics of the Unified Health System (DATASUS). The data collected were from hospitalizations and deaths in the municipality of Belém, from January 2019 to December 2023, as these are the last five years with consolidated data in the system.
Results: The profile of the study population was characterized by females (61.3%), aged between 60 and 69 (47.2%), self-declared black/brown (59.5%), admitted as an emergency (89.3%).
Conclusion: The current study showed that in Belém the individuals most affected by external causes are women aged between 60 and 69. In the face of the COVID-19 pandemic, the number of hospitalizations stagnated in 2020. As a suggestion, it is hoped that more research will be carried out into the health of the elderly, as a way of encouraging the development of strategies to mitigate the impacts of ageing.

***Keywords**: mortality; hospitalization; external causes; elderly.*

1. INTRODUCTION

Law n°. 14.423/2022 introduced an amendment to Law n°. 10.741/2003, known as the Statute of the Elderly. The amendment replaces the terms “elderly” and “elderly” throughout the law with “elderly people” or “elderly person.” Adding the term “people” before “elderly” emphasizes that, beyond generational conditions, stages of life, and aspects related to age, there is a person.

Article 3 highlights the obligation of families, communities, society, and public authorities to ensure the rights of elderly individuals, including life, health, culture, sport, leisure, and work. Additionally, it emphasizes access to food, education, citizenship, freedom, dignity, respect, and family and community life.[1]

In Brazil, a person aged 60 or older is considered elderly from a chronological perspective, regardless of their psychological, social, or biological state in society. However, the concept of senility encompasses multidimensional aspects, considering that age within the aging process goes beyond the chronological dimension. Lifestyle, decisions made, and biopsychosocial conditions directly influence this process. Thus,

people age in different ways.[2]

To understand the aging process, it is necessary to recognize that it is a global phenomenon and is considered a 20th-century achievement. Improvements in various social spheres have contributed to the increase in life expectancy, but this has also brought numerous challenges for both society and the government. The growth of the population over 60 years old has exacerbated social inequality. For this reason, it is essential to implement improvements.[3]

External causes are understood as actions resulting from violence, which can be intentional, such as suicide, or unintentional, such as traffic accidents, homicides, assaults, drownings, falls, burns, accidents caused by environmental factors like landslides and floods. Other circumstances are also included under external causes, such as exposure to radiation, mechanical force, electrical, chemical, and thermal energy. Violence negatively impacts human dignity and stems from complex social causes. To understand how these causes affect individuals, it is necessary to investigate the factors that trigger and worsen them, including population growth.[4]

Demographic growth has been the main factor responsible for bringing various impacts to society. With the increase in population and life expectancy, there has been a rise in violence, an indicator that has brought external causes into focus in mortality research in recent years. Understanding the mortality rate and its age distribution within the population is essential for developing strategies to anticipate risk behaviors and analyze the impacts these behaviors may cause.[5]

Mortality from external causes shows that regional differences reveal significantly higher rates in the North and Northeast regions compared to other regions. This discrepancy is due to differences in the transitions that occurred during the epidemiological and demographic transformations in the states.[6]

Aging is a stage in which individuals undergo various changes, with cognitive, motor, and functional capacities being the most affected. As a consequence, elderly people become more vulnerable to the development of chronic diseases, which are contributing factors to some external causes. In addition to pre-existing chronic diseases, the elderly population is the group most exposed to the occurrence of disability, hospitalization, and death.[7]

Although accidents and trauma show significant rates among younger populations, global mortality among the elderly holds a prominent position in the rankings. Physiological decline, reduced functional capacity, and the development of frailty syndrome are factors that increase the vulnerability of older adults. These declines are considered risk factors, along with comorbidities, polypharmacy, alcoholism, participation in the labor market, and urban dynamics.[8]

The presence of pre-existing diseases in an individual makes them more prone to longer hospital stays, which consequently increases expenses for public services due to the recovery time. Caring for elderly patients during hospitalizations is complex and requires meticulous work, demanding intense and specific care. This care dynamic represents a social burden and economic impact.[9]

According to this information, it is estimated that there are 32 million elderly

people in Brazil. In Belém, there are over 200,000 elderly individuals, representing 15% of the municipality's population.[10] Although it represents a significant part of the population, health care policies for the elderly are insufficient and predominantly focused on the chronic conditions of individuals. For this reason, it is crucial to find ways to ensure that the aging process is faced in the best possible way, with dignified conditions, by addressing social inequalities and preparing society to cope with the challenges of aging.[11]

2. MATERIALSANDMETHODS

This is a cross-sectional, descriptive study with a quantitative approach based on secondary open-access data available in the Hospital Information System (SIH/SUS) and the Mortality Information System (SIM/SUS) of the Unified Health System, provided by the Department of Informatics of the Unified Health System (DATASUS). The data collected were from hospitalizations and deaths that occurred in the municipality of Belém between January 2019 and December 2023, as these are the last five years with consolidated data in the system.

The municipality of Belém is located in the state of Pará, in the northern region of Brazil, covering an area of 1,059.466 km² (IBGE, 2022). Its economy is predominantly based on commerce and services. The population size is 1,506,420 inhabitants, with 53.3% women and 46.7% men.

The Hospital Information System (SIH/SUS) uses the Hospitalization Authorization (AIH) as its data collection tool, while the Mortality Information System (SIM/SUS) uses the Death Certificate (DO) as its data collection tool. Data collection occurred between August and October 2024. Access to the DATASUS platform was through the website "http://datasus.saude.gov.br/", under the "tabnet" section, followed by the "epidemiological and morbidity" option to access the "SIHSUS – Hospital Information System of SUS" for external causes, and the "Vital Statistics" option to access the "Mortality Information System." The original data was downloaded in file format for Excel spreadsheets (CSV format), available for public access, and then organized in Microsoft Excel® to create a consolidated database.

The variables addressed in the hospital information system were: sex (male and female), age group (60 to 69 years, 70 to 79 years, 80 years or more), self-reported race/color (white, yellow, brown/black, ignored), type of care (emergency, elective, other), cause of hospitalization, that is, external causes, and length of stay (in days). Regarding the mortality information system, only the causes of death from external causes were addressed.

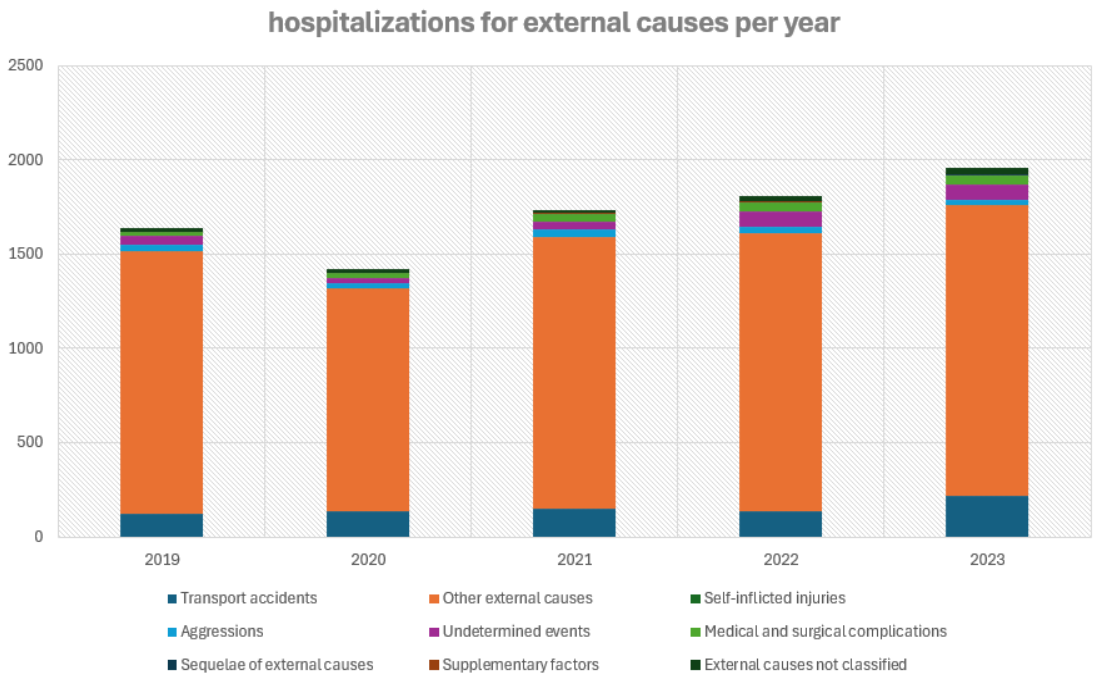
The data were tabulated and organized in Microsoft Excel (Microsoft Office 2016), and a descriptive analysis was conducted to characterize the epidemiological and sociodemographic aspects through the distribution of simple and relative frequencies.

3. RESULTS

The historical series from 2019 to 2023 totaled 8,568 hospitalizations. The fig

shows the behavior of hospitalizations categorized into major external cause groups, from which it was observed that 2023 had the highest prevalence of cases, while 2020 had the lowest. The groups with the highest number of hospitalizations were, in first place, "other external causes of injuries and accidents" (82.1%), followed by "transport accidents" (9.0%) and, in third, "events of undetermined intent" (3.2%). The large group of "other external causes" showed some stability over the period, with a notable increase between 2022 and 2023. Other highlights include "transport accidents," which had a higher number of hospitalizations in 2023 compared to previous years, and "events of undetermined intent," which showed growth in the last two years of the study (Fig 1).

Fig1. Totalof hospitalizations due to external causes by year



The profile of the study population was characterized by individuals of the female sex (61.3%), in the age group of 60 to 69 years (47.2%), self-identified as black/brown (59.5%), and hospitalized for emergency care (89.3%). It is important to highlight the number of hospitalizations with missing race/color information in the system (38.0%). Finally, the year with the highest average length of stay was 2022, with an average of 4.3 days (Table 1).

Table1.Profile of hospitalizations due to external causes

	2019	2020	2021	2022	2023	Total*
Variables	**n**	**n**	**n**	**n**	**n**	**n(%)**
Sex						
Male	613	525	686	709	787	3320(38,7%)
Female	1029	897	1049	1101	1172	5248(61,3%)
Age group						
60-69years	806	632	805	836	964	4735(47,2%)
70-79years	505	456	573	588	597	3125(31,7%)
≥80years	331	334	357	386	398	2192(21,1%)
Race/color						
White	21	20	39	22	63	165(1,9%)
Brown/black	1202	926	732	668	1570	5098(59,5%)
Yellow	3	4	10	1	29	47(0,5%)
Ignored	416	472	954	1119	297	3258(38,0%)
Type of care						
Elective	156	171	208	166	211	912(10,6%)
Emergency	1484	1250	1527	1643	1745	7649(89,3%)
Other	2	1	0	1	3	7(0,1%)
Average length of stay(in days)	3,9	4,0	3,6	4,3	3,9	-

**The percentage values refer to the total of the historical series*

Regarding the occurrence of hospitalizations by age group, it is noted that, in all major groups, the age group with the highest prevalence is 60-69 years, that is, "younger" elderly individuals. Without exception, this occurred even in groups where the number of hospitalizations was low, such as "self-inflicted injuries" and "sequelae of external causes" (Table 2).

Table2.Hospitalizationsby age group

Causes	2019			2020			2021			2022			2023			Total*n(%)
	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥80 yearss	
	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	
Transport accidents	91	25	10	94	25	16	105	33	15	76	43	18	126	65	26	768 (9,0%)
Other external causes	641	448	304	478	399	307	628	495	318	636	490	346	721	474	351	7036 (82,1%)
Self-inflicted injuries	1	0	0	2	0	0	0	0	0	0	0	0	0	1	0	4(0,0%)
Assaults	22	6	5	15	5	7	18	10	11	28	5	4	17	7	4	164 (1,9%)
Undetermined events	20	19	3	9	15	0	21	17	5	57	18	8	51	22	7	272 (3,2%)
Medical end surgical complications	11	4	8	14	10	4	17	15	7	17	22	9	24	14	10	186 (2,2%)
Sequelae of external causes	2	0	1	1	0	0	0	1	0	1	0	0	3	0	0	9(0,1%)
Supplementary factors	1	0	0	1	0	0	4	0	0	1	1	0	2	1	0	11 (0,1%)
Unclassified external causes	17	3	0	18	2	0	12	2	1	20	9	1	20	13	0	118 (1,4%)

** The percentage values refer to the total of the historical series.*

The predominance of hospitalizations for females was primarily driven by the large group of "other external causes," in which female hospitalizations were twice as high as male hospitalizations in all years. In the other groups, male hospitalizations prevailed (Table 3).

Table 3.Hospitalizations by sex

Causes	2019		2020		2021		2022		2023		Total* n(%)
	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	
	n	n	n	n	n	n	n	n	n	n	
Transport accidents	75	51	72	63	107	46	88	49	123	94	768(9,0%)
Other external causes	452	941	384	800	495	946	493	979	539	1007	7036(82,1%)
Self-inflicted injuries	0	1	2	0	0	0	0	0	1	0	4(0,0%)
Assaults	22	11	14	13	26	13	30	7	22	6	164(1,9%)
Undetermined events	25	17	17	7	27	16	54	29	47	33	272(3,2%)
Medical end surgical complications	18	5	17	11	20	19	21	27	30	18	186(2,2%)
Sequelae of external causes	1	2	1	0	0	1	1	0	2	1	9(0,1%)
Supplementary factors	1	0	1	0	3	1	1	1	3	0	11(0,1%)
Unclassified external causes	19	1	17	3	8	7	21	9	20	13	118(1,4%)

**The percentage values refer to the total of the historical series*

The large group of "other external causes" also accounted for the highest number of deaths (60.3%) during the period, followed by "transport accidents," which had 16.2% of the records. The occurrence of deaths by age group shows that elderly individuals between 60-69 years old were the majority in all major groups, except for the "other external causes" group, where the 80 years or older age group prevailed. Additionally, "medical and surgical complications," although having few deaths, all occurred in individuals aged 80 years or older. It is noteworthy that the number of deaths recorded for the "self-inflicted injuries" group was much higher than the number of hospitalizations for the same cause (Table 4).

Table 4.Mortality by age group

Causes	2019			2020			2021			2022			2023			Total* n(%)
	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥ 80years	60-69 years	70-79 years	≥ 80years	
	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	
Transport accidents	14	12	3	19	5	6	10	7	7	10	9	4	18	9	7	140(16,2%)
Other external causes	11	26	52	16	23	57	20	31	59	21	27	52	23	43	60	521(60,3%)
Self-inflicted injuries	6	2	0	9	4	0	0	0	0	10	4	3	8	1	0	47(5,4%)
Assaults	9	3	0	8	3	1	6	3	1	6	4	0	10	2	1	57(6,6%)
Undetermined events	3	6	10	7	9	9	8	6	4	2	7	6	6	2	9	94(10,9%)
Medical end surgical complications	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	3(0,3%)
Sequelae of external causes	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2(0,2%)

**The percentage values refer to the total of the historical series.*

The occurrence of deaths by sex reveals that only the groups "other external causes" and "undetermined events" had a majority of deaths in females. Self-inflicted injuries, for example, caused the death of a much higher number of elderly males (Table 5).

Table5.Mortality by sex

Causes	2019		2020		2021		2022		2023		Total*
	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	
	n	n	n	n	n	n	n	n	n	n	n(%)
Transport accidents	23	6	19	11	15	9	15	8	25	9	140(16,2%)
Other external causes	35	54	40	56	51	59	48	52	59	67	521(60,3%)
Self-inflicted injuries	7	1	12	1	0	0	15	2	8	1	47(5,4%)
Assaults	12	0	11	1	8	2	7	3	11	2	57(6,6%)
Undetermined events	8	11	12	13	9	9	7	8	6	11	94(10,9%)
Medical end surgical complications	0	1	0	0	0	1	1	0	0	0	3(0,3%)
Sequelae of external causes	0	0	1	0	0	0	1	0	0	0	2(0,2%)

**The percentage values refer to the total of the historical series.*

4. DISCUSSION

In this study, regional data on hospitalizations and deaths among the elderly population due to external causes in Belém-PA, Brazil, were collected for the period from 2019 to 2023, totaling 8,568 hospitalizations. Based on the results, it was observed that 2020 had the lowest prevalence of hospitalizations, which can be attributed to the COVID-19 pandemic declared in March 2020. This event restricted the movement of people in risk groups. In 2023, the number of hospitalizations increased again, with the contributing factor being the global control of the pandemic in May 2023, allowing the population, including the elderly, to resume their daily activities.[12]Falls are considered one of the main causes of accidents in the elderly population, leading to hospitalization and even death. Moreover, they are prevalent among individuals over 60 years old. There has been a significant increase in hospitalization rates for this external cause within the SUS system[13], which is categorized under the group "other external causes of injuries and accidents." This group showed predominance in Pará, ranking first compared to other external causes within the major groups. In second place in the ranking of hospitalizations are traffic accidents, and in third place are "events of undetermined intent."

Lopes et al. (2022), when mapping the profile of hospitalizations due to external causes in Fortaleza-CE, concluded through their research that the majority of accidents occurred among elderly individuals whose activities were carried out informally, including when leaving their homes to engage in recreational activities in urban areas. The types of accidents mentioned in the study include falls from one's own height, pedestrian accidents, falls related to violence, and traffic accidents, which are among the main causes. This research conducted in the northeastern region of Brazil shows similarities to the northern region, considering that in 2023 there was an increase in hospitalizations due to traffic accidents. Lopes emphasizes that healthier elderly individuals are more affected compared to the oldest-old, as the latter tend to stay around their own homes most of the time. In contrast, healthier elderly individuals, considered “younger” seniors, are more engaged in active and work-related activities, which contributes to the occurrence of traffic accidents, falls in public spaces, and other types of violence associated with busier areas of the city.[14]

A study conducted in Porto Velho-RO by Carvalho et al. (2019) on the characterization of the profile of hospitalizations among the elderly due to external causes found that the majority of hospitalizations involved men compared to women, in the age group of 60 to 69 years, with a predominance of Black and Brown individuals.[15] Conversely, the present study analyzed that the predominant group of hospitalizations in Belém is women. These results may vary according to social and demographic changes in each region. However, it is worth noting that women’s greater concern for their health is a determining factor for the higher number of female hospitalizations in Pará. This is because self-care leads women to seek health services more often, whereas men tend to show greater resistance to the practice of self-care.[16]

The age group between 60 and 69 years leads an active life compared to those aged 80 or older and is engaged in the labor market, as well as in social and economic activities. Despite the benefits of this participation, challenges remain related to work activities, especially in non-adapted environments, which increases exposure to transport accidents and falls from one's own height.[17] Social inequality has a significant impact on hospitalizations due to external causes, as self-declared Black/Brown individuals represent a substantial proportion of these hospitalizations. It is evident that inequality contributes to processes of fragility, as groups in situations of social vulnerability and low educational attainment have reduced access to regular physical activity,

blood pressure control, and are prone to polypharmacy.

Paiva and Júnior (2024) analyzed that entering the aging processdefined as 60 years old in developing countries and 65 years old in developed countriesdoes not mean the individual receives a certificate of incapacity, especially today, there are a variety of resources that promote active aging, preserving and improving physical and psychological aspects, however, these resources are still not capable of reaching all social spheres.[18] It is estimated that the age group most affected by hospitalizations in Belém is between 60 and 69 years, precisely due to the encouragement of active aging, with participation in the labor market and work routines. This age group is considered younger compared to those aged over 69. Another interesting aspect highlighted is the study by Araújo et al. (2021), which inferred that most research conducted on elderly individuals of both genders aged over 80 years suggested a tendency toward early clinical-functional vulnerability, particularly among men in the northern region of the country.[19] This study supports the findings of this research, given that the more active population has a greater likelihood of exposure to accidents due to their continued participation in urban life, while those over 80 years are going through the process of senescence.

Another important point relates to hospitalizations, where females represent the majority, especially in the large group of other external causes, with the number of female hospitalizations being double that of males. Findings in the literature reinforce what was found in this data collection, as the prevalence of female hospitalizations is linked to functional and motor decline, associated with the post-menopausal period. Since the beginnings of society, women have been associated with the domestic sphere, and despite significant advancements, this patriarchal aspect contributes to elderly women's exposure to domestic accidents, such as falls from their own height, which justifies the rise in hospitalizations in this category compared to males. It is worth noting that this predominance occurred only with respect to other external causes.[20] The other findings suggest that, due to demographic aspects and risk behaviors, men continue to have higher hospitalization rates from traffic accidents and assaults. A hypothesis is that men tend to circulate more in urban areas, and this factor may also be linked to social inequality, as elderly men are more involved in informal work practices and, consequently, are more exposed to other types of external causes, such as urban violence.[21]

Regarding deaths, the results collected in Belém showed that the large group of other external causes prevailed, with the main age group being elderly individuals over 80 years old. It is known that the decline in physical abilities increases the presence of chronic diseases, cognitive and visual changes, and reduced physical mobilityfactors that make the elderly population more vulnerable to some external causes, with falls being one of them. Estimates for this population indicate that 60 to 70% of accidents occur in the home environment, and that 30% of individuals over 65 years old, and at least 50% of those over 80, experience at least one fall per year. This estimate justifies the occurrence of accidents among the population over 80 years old. Collected records show that the percentage of deaths due to "other causes and accidents" is prominent, with falls being the leading cause of death among individuals over 80.[22]

While other external causes, such as traffic accidents, maintained the age group of 60 to 69 years, using the study by Dias et al. (2024) as a parameter, which concluded that accidents were the leading cause of mortality in healthy elderly individuals aged 60 to 69, it is clear that the results are consistent. This emphasizes issues related to mobility, infrastructure, and safety aspects for the elderly population. These limitations are not restricted to the northern region but apply to other regions of Brazil as well. Dias' studies showed that the northern region experienced an increase in the percentage of mortality due to external causes, corroborating the

findings in Belém, Pará, where it was found that deaths due to other external causes, followed by traffic accidents, are the leading causes of death in the elderly.[23]

The age group between 60 and 69 years had the highest number of hospitalizations across all major groups, even in self-inflicted injuries. Although this category had the lowest occurrence, the few cases that did occur were in the aforementioned age group. This raises discussions about the mental health of elderly individuals considered "younger" compared to others. Regarding deaths from "other external causes," this group was predominant, with the female sex being the most affected. This is because falls are included in this category, and women are more vulnerable, both due to physiological factors and cultural determinants. Men, on the other hand, were more affected by traffic accidents in the last five years, as the male population tends to circulate more in urban areas, exposing them to a higher risk of accidents in these areas. Mortality from "other external causes" in elderly women was higher compared to men from 2019 to 2023. However, deaths due to traffic accidents were more predominant in men. A study on mortality profiles in Minas Gerais inferred that the primary victims of domestic violence are women; however, those who die from traffic accidents and falls are men. The only contradiction to this in the current study relates to falls, as women are the most affected.[24]

While in traffic accidents the percentage of deaths was higher in the "younger" elderly population, in deaths from "other external causes," this age group increased to 80 years and older. In medical and surgical complications, this age remained the same. Deaths due to self-inflicted injuries were higher than the number of hospitalizations, which suggests that some elderly individuals died even before being hospitalized. In comparison, although the hospitalization age group for other external causes is 60 to 69 years, the age group for death from the same cause is predominantly 80 years or older. This can be explained by the physiological fragility triggered by aging, as recovery becomes slower compared to the younger population, thus increasing the mortality rate. In total, deaths from other external causes and indeterminate events were predominantly among females. In contrast, self-inflicted injuries caused far more deaths in males. Some studies in the field of mental health suggest that women attempt suicide more often than men, using less violent methods, while men are more likely to engage in violent and lethal self-injury due to stigmas associated with male mental health and the difficulty in recognizing the need for help.[2]

The limitation of this study refers to the unavailability of recent research on external causes directed at the elderly population and the difficulty in finding global analyses in the literature within the major groups. Recent studies tend to focus in detail on specific external causes, such as falls, assaults, and traffic accidents. However, it is necessary to include the need to describe all those included in the major groups to encourage research initiatives on this topic. Additionally, some relevant information for the study was limited due to issues accessing the database. For this reason, the characterization of the population concerning race/color was compromised, as 38.0% of the hospitalizations did not report the individual's self-declared color. On the other hand, the results of this study will contribute information regarding deaths and hospitalizations due to external causes in the elderly population of Belém, PA, supporting health recovery and promotion for the elderly, as well as training for nursing professionals interested in studying this issue.

5. CONCLUSION

In light of the COVID-19 pandemic, there was a stagnation in the number of hospitalizations in 2020, due to the implementation of restrictive circulation measures. In contrast, in 2023, the number of hospitalizations surged, due to the control and suspension of these measures. Female sex predominated in hospitalizations, suggesting that women seek healthcare services more than men, who still show resistance to practicing self-care.

The current study highlighted through data collection and comparison with other research in the literature that in Belém, individuals most affected by external causes are women between the ages of 60 and 69. This group is the most active compared to those over 70. Black and brown women stood out in this study, reinforcing findings in the literature that the impacts of social inequality still persist today. Urgent hospitalizations reached an alarming 89%. Furthermore, the number of hospitalizations in females was predominant within the major group called "other external causes," which includes falls. Falls remain the most common accident among women in the aging process, due to elderly women still performing domestic activities, thus becoming the most exposed group to such accidents.

The data from this research emphasize the need to develop strategies to reduce hospitalizations and deaths in the elderly, through the development of public health policies focused on security, infrastructure, transportation, recreational activities that help reduce psychological issues in the elderly population, promoting respect for legislation that ensures the rights of older adults, and preparing healthcare professionals to provide comprehensive care for individuals, addressing their needs and adapting to each person's subjectivity.

It is suggested that more research on elderly health be conducted, to encourage the development of strategies to mitigate the impacts of aging, given that it is an inevitable process. The contribution of studies on this topic can help identify factors that negatively affect the life expectancy of the elderly. The global population is aging, which is why it is necessary to prepare society to handle aging, both for others and oneself, through understanding limitations and developing strategies for inclusion and safe participation in society.

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