


Characterization of the epidemiological profile of suicide in the elderly in Brazil occurring in the period from 2010 to 2019

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ABSTRACT

Mortality rates by suicide in Brazil have been increasing in the last ten years, and the elderly population constitutes a vulnerable population to this grievance. Therefore, this study aimed to characterize the epidemiological profile of suicide in the elderly in Brazil, occurring in the period from 2010 to 2019. This is a descriptive ecological study using data from the Mortality Information System of DATASUS regarding mortality from intentionally self-harm in the elderly population, which were analyzed using simple descriptive statistics and presented as raw values and percentages. The data show that 16.7% of the suicides in the period occurred in the elderly population, and 80.4% were men, 48.9% married, 63.1% white, and 54.4% had only up to 7 years of schooling. The main place of occurrence was the home (67.9%). The most prevalent types of injuries were hanging/strangulation/suffocation (65.7%), gunshot (10.5%), and intentional auto-intoxication (10.1%). It is necessary to adopt preventive measures for this population, according to the risk factors involved, especially in countries where the demographic transition is towards population aging.

Keywords: Suicide, Epidemiology, Aged.

1 INTRODUCTION

Suicide is a major global public health problem and is among the leading causes of death worldwide, exceeding mortality from malaria, HIV/AIDS, breast cancer or war, and homicide (WHO, 2021). Although suicide rates have been declining since 2000 globally, with reductions ranging from 17% to 47%, in the Region of the Americas suicide rates have increased by 17% over the same period (WHO, 2021).

In Brazil, suicide rates in people aged 60 years and older increased 14% between 2007 and 2017 (MACHADO, 2020). In the current context of demographic transition of Brazilian society, with an aging population, identifying groups at risk of suicide is essential in order to enable interventions aimed at the needs of specific populations (WHO, 2021).

In this context, the mental health of the elderly acquires relevance, since it is shaped by physical, social and environmental factors, as well as by cumulative impacts as a result of the experiences lived over the years, in addition to stressful aspects typical of this phase, such as loss of functional capacity, musculoskeletal pain, grief and isolation, which can result in loneliness and psychological stress (WHO, 2022). In addition, the difficulties of access to goods and services should be considered, as well as the variations in financial capacity and the usual situations of discrimination due to the relationship with old age, intrinsic in Brazilian society.

Such experiences are able to drive intense psychological suffering to the elderly, and may favor the occurrence of suicidal ideation, attempt or effectuation. To this end, it is understood that suicidal ideation is presented by thoughts aimed at the interruption of existence itself, which may culminate in a suicide plan (CAVALCANTE; MINAYO, 2015), while the suicide attempt is the embodiment of ideation, which may or may not be fatal, drawing attention to possible successions of repetitions (MENEGHEL; MOURA; HESLER; GUTIERREZ, 2015).

Through suicide, the individual seeks an end to suffering, whether psychoemotional, physical, functional or socioeconomic. However, mental health care for the elderly, as well as for other less socially privileged groups, is limited and scarce on the world stage (WHO, 2022).

That said, it is clear that suicide is a phenomenon that can be avoided, which makes research aimed at understanding the phenomenon in the elderly population even more relevant. Thus, this study aimed to characterize the epidemiological profile of suicide in the elderly in Brazil, occurring over a ten-year period (2010 to 2019).

2 METHOD

This is an ecological and descriptive study of deaths of people aged 60 years or older in Brazil from self-harm (suicide) in the period 2010-2019. The data were obtained from the Mortality Information System of the Ministry of Health, being analyzed the records of ICD X60 to X84, from January 1, 2010 to December 31, 2019 (BRASIL, 2022). Data were tabulated in Excel, and analyzed using simple descriptive statistics and presented in absolute values and percentages. The variables gender, marital status, race/color, education, place of occurrence, and types of self-harm were analyzed. Since the study used secondary data from the public domain, submission to the Research Ethics Committee was not necessary.

3 RESULTS

In the period from 2010 to 2019, there were 112,166 deaths by suicide in Brazil. Of these, 16.7% (18,688) occurred in the population aged 60 years or older, of which 80.4% were male, 48.9% married, 63.1% white, 54.4% with up to 07 years of schooling, and 67.9% occurred in the household (table 1).

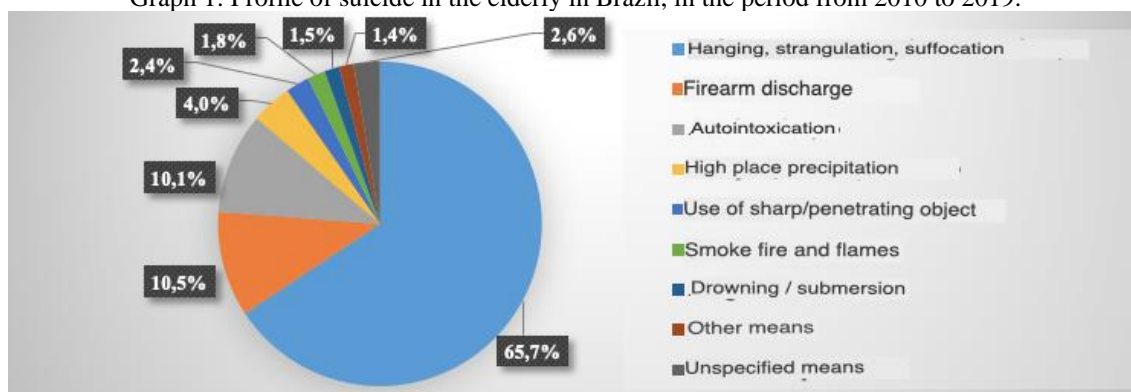
Table 1: Characterization of the elderly who committed suicide in Brazil, in the period from 2010 to 2019.

Variables	N	%
Sex	18.688	100,0
Male	15.031	80,4
Female	3.656	19,6
Ignored	1	0
Marital status	18.688	100,0
Married	9.138	48,9
Widower	3.091	16,5
Single	2.746	14,7
Separated	1.862	10,0
Ignored	1.439	7,7
Another	412	2,2
Race/color	18.688	100,0
White	11.792	63,1
Brown	5.550	29,7
Black	666	3,6
Yellow	156	0,8
Indigenous	37	0,2
Ignored	487	2,6
Education	18.688	100,0
No	2.196	11,8
1 to 3 years	4.086	21,9
4 to 7 years old	3.882	20,8
8 to 11 years old	2.096	11,2
12 years and older	1.250	6,7
Ignored	5.178	27,7
Place of occurrence	18.688	100,0
Hospital	2.746	14,7
Other Health Establishment	206	1,1
Domicile	12.696	67,9
Public road	837	4,5
Other	2.149	11,5
Ignored	54	0,3

Source: Mortality Information System (BRASIL, 2022).

Regarding the types of intentionally self-inflicted injuries, the most prevalent were hanging/strangulation/suffocation (65.7%), followed by gunshot (10.5%) and intentional autointoxication (10.1%), according to chart 1.

Graph 1: Profile of suicide in the elderly in Brazil, in the period from 2010 to 2019.



Source: Mortality Information System (BRASIL, 2022).

4 DISCUSSION

The male predominance in the numbers of elderly suicides is similar to that found in other studies (MENEGHEL; MOURA; HESLER; GUTIERREZ, 2015). In most countries, suicide rates are three to four times higher in men, while women present more ideation and attempts, i.e., although women present a higher frequency of attempted suicides, men manage to consume them more frequently (SILVA *et al.*, 2018).

Thus, it can be seen that the choice of suicidology is also crossed by gender issues, which contributes to think, as suggested by the study of Santos *et al.* (2021), that, historically, life and death are experienced differently between genders. If, on the one hand, men have, from very early on, access to the most lethal means, on the other hand, women, among the experiences they are affected by, are not exposed as often to feelings of impulsiveness or competitiveness, as men are throughout their respective vital developments.

Moreover, with age, the change in routine for men and their introduction into the family environment after retirement, traditionally considered a feminine space, causes men to have their social role placed in check, which can lead to feelings of loneliness. It is worth noting that the stimulus to solve social and personal conflicts in an aggressive way is a standard of hegemonic masculinity, making men more vulnerable to be, at the same time, victims and main authors of different expressions of social violence and, especially, of lethal self-violence (MINAYO; MENEGHEL; CAVALCANTE, 2012).

The higher prevalence of suicide in married elders found in this study corroborates a study conducted in the Federal District, showing that marriage is not a protective factor, and that suicide may be associated with psychosocial factors arising from the limitation or termination of the active pattern of men at this age (BARROS; DOS REIS; DE OLIVEIRA; BARROS, 2020). The high proportion of suicides in white elderly may be related to the greater number of elderly of this race/color, compared to the others, since in the 2015 National Household Sample Survey, 52.6% of the elderly reported themselves as white (IBGE, 2015).

The proportion of suicides in the elderly with up to 7 years of education (54.4%) was significant. In a study on the epidemiological profile of suicides in Brazil, from 2006 to 2015, Da Mata, Daltro, and Ponde

(2020) reached a lower number of 43.78% of suicides in individuals with up to 7 years of education in the general population. However, in this study, 27.7% of the suicide cases had their schooling ignored, which may hinder the inference of conclusions about the role of years of study in the occurrence of this offense.

This suicide profile in the elderly was found in a study by Silva *et al.* (2022), with data on suicide mortality in individuals aged 60 years or older, from 2010 to 2019, in the Northeast region. The authors observed a profile of suicidal elderly people composed of males, between 60 and 69 years old, with one to seven years of study, married, of brown race/color, besides the predominance of the home (67.3%) as the place of occurrence.

This study also pointed out the residence as the main place of occurrence of suicide in the elderly, corresponding to 67.9% of cases. A study by Gomes *et al.* (2021) with deaths by suicide in Rio Grande do Sul, from 2013 to 2017, showed that approximately 70% of the cases occurred at the victim's home, with a possible justification being the secrecy of the methods chosen in order to avoid interventions by third parties to prevent the act. Even in late deaths that occurred in hospitals, resulting from suicidal interventions, the place of greatest occurrence continues to be the home (GIANVECCHIO; JORGE, 2022).

Regarding the means, this study found the highest prevalence of intentionally self-harm being performed by hanging/strangulation/suffocation. Suicide by mechanical asphyxia is described in the literature as being the one with the highest prevalence, in both genders, because it is easily accessible and executed (MARÍN-LEÓN; BARROS, 2003), has greater lethality potential, and is less likely to have adherence to means of prevention, since the objects of a hanging are usual in the private and home environment of the elderly (SOUSA *et al.*, 2014; ZHANG; DING; SU, 2016; BOTEGA, 2014).

Regarding intentional autointoxication, in this study, this means was the third most prevalent, although the proportion is much lower than that of mechanical asphyxia, possibly due to the possibility of the victim being rescued when the autointoxication is quickly detected. According to the World Health Organization (WHO), it is estimated that for every suicide that is consummated, there are about twenty people who attempt it. However, suicide attempts are apparently rarer, since it is estimated that most of these attempts remain unknown to health services, and therefore not correctly diagnosed or underreported (MENEGHEL; MOURA; HESLER; GUTIERREZ, 2015).

Santos *et al.* (2021) found that the medications most commonly used in autointoxication constitute the classes of psychotropics, anticonvulsants, hypnotics, antiparkinsonians, and sedatives. When contextualizing the use of medications as suicidal means, it is important to consider that the elderly use several medications, and sometimes they may take pharmacological combinations that can be potentially dangerous and result in adverse effects, such as accidental overdose or suicide. Thus, as a protective measure, it is of fundamental importance that polypharmacy in the elderly is something to be monitored with greater care by health professionals and the people who make up the family environment. It is worth noting that the proportion of cases of suicide by autointoxication can also be affected by the access of

individuals to pesticides and poisons, some of them illegally marketed in Brazil (DA MATA; DALTRO; PONDE, 2020).

The data observed in this study are worrisome when one considers the possibility that there are many people in this age group in psychological distress. In addition, unsuccessful suicide attempts, which were not the subject of this study, add to the potential risk of individuals who attempt to take their own lives, since for each death secondary to self-induced violence in old age, there is the presence of suicidal ideation and attempts in at least four other elderly people, justifying the tendency of growth of this grievance in this population group (MARQUES *et al.*, 2020).

In summary, the elderly population constitutes a population vulnerable to suicide, given the greater fragility of the biological systems of the individual due to the senescence process; greater vulnerability to mood and mental disorders with the presence of existential crises; reduced functionality and increased disabilities in health; social isolation, low family support (SILVA *et al.*, 2022) and loneliness; mourning for the loss of a partner or children, among other factors, constituting situations that weaken the mental health of the elderly and favor an emotional structure conducive to depression, becoming risk factors for suicide among the elderly, as well as previous ideations and attempts (SANTOS *et al.*, 2021).

It is important to think about the process of aging in the sense that it is integrated into everyday life, relating to physical limitations, illness, social and family ties, thus resignifying the ways of living and the suffering added to losses, which involve growth and evolution (SANTOS, 2018; SILVA *et al.*, 2018; RAMOS *et al.*, 2019).

5 FINAL CONSIDERATIONS

From the results, it can be concluded that elderly, white, married and poorly educated men constitute a population vulnerable to suicide. It is necessary to adopt preventive measures for this population, according to the risk factors involved, especially in countries where the demographic transition is towards population aging.

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