

# We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

186,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index  
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?  
Contact [book.department@intechopen.com](mailto:book.department@intechopen.com)

Numbers displayed above are based on latest data collected.  
For more information visit [www.intechopen.com](http://www.intechopen.com)



# Suicide: A Public Health Problem in Brazil

*Maria Cecília de Souza Minayo and Camila Alves Bahia*

## Abstract

This text focuses on the situation of suicide in Brazil, defines and quantifies information, and presents a description of the main risk factors, as well as a reflection on the phenomenon and the possibilities for prevention. Fatal suicide is a serious public health problem. In 2012, 172 member states of the World Health Organization registered 804,000 self-inflicted deaths, representing an annual rate of 11.4/100,000, of which 15/100,000 men and 8.0/100,000 women. Consummate suicide rates are unevenly distributed globally, within countries, according to sex and according to age groups. The mortality rate is highest in Asia (17.7/100 thousand inhabitants), followed in Europe (12/100 thousand inhabitants). The Americas have a mortality rate of 7.3/100 thousand inhabitants (WHO, 2014). In Brazil, with an unevenly distributions between the regions, gender and ages, the total rate is 4.5/100,000. In the country and everywhere, risk factors are classified as medical, psychiatric and psychological, micro social, social and environmental. The history of the occurrence of suicides shows that it is possible to prevent them and to reduce the incidence rates. This requires investment in local diagnostics and multidisciplinary action. Given the delicacy of the problem and the taboos that surround it, the protection network for people at risk for suicide needs to be constantly in the process of training and taking action. As national and international surveys show, at least two-thirds of the individuals who tried or committed suicide had somehow communicated to friends, family, acquaintances or health professionals their intention to kill themselves.

**Keywords:** fatal suicide, suicide attempts, suicidal ideation, risk factors, prevention

## 1. Introduction

Suicide is an intentional act to end one's own life, which usually occurs in the face of such intense suffering that the people only see their death as a relief. In general, a self-inflicted death occurs after the individual has already demonstrated various types of suicidal behavior, ranging from *self-harm*, *ideation*, *planning one's death* to attempts that may or may not be fatal [1]. In general, the boundaries between *self-neglect*, *suicidal ideation*, *suicidal behavior*, and *completed suicide* are blurred since an attempt can be interrupted and become a fixed idea or intention. At the same time, a thought can erupt with overwhelming anguish and anxiety and explode in a life-termination act. However, experts warn that not every thought about death or the wish to die is evidence of some suicide risk [2].

Suicide is among the ten leading causes of death globally - more than 800,000 people take their own lives each year. This is the second leading cause of death

among 15-to-29-year-olds and the first for girls in the world [3]. The global mortality rate in 2012 was 11.4 per 100 thousand inhabitants, and was higher in Asia (17.7/100 thousand inhabitants), followed by European countries (12/100 thousand inhabitants). The Americas have a mortality rate of 6.1/100 thousand inhabitants. Brazil ranks eighth in the number of suicides and has, on average, 24 self-inflicted deaths daily. According to international consensus, the number of attempts is 10 to 20 times higher than the number of deaths. There is evidence that only 25% of those who try come into contact with hospitals, and those who reach these institutions are in a severe condition [3]. The reported cases are the tip of the iceberg, and most of those with suicidal behavior remain anonymous: this can be seen by underreporting in any searched official source.

Besides the adverse effects that a suicidal event generates to the community and society, its psychological impact is intense, even for those who have no direct connection with the individual who died. From the viewpoint of economic costs, millions of dollars are spent due to completed suicide, attempts, and ideas (around the equivalent of 1.8% of the total expenditure on diseases in the world or the operational cost of war). Gender, age, culture, and ethnicity have important implications for the epidemiology of suicide, as will be seen in this review. Several risk factors are associated with different causes that interact with each other, including medical, biological, environmental, psychiatric, psychological problems, and existential-philosophical and social motivations.

Among the biological factors, some research reveals genetic traits that predispose people from the same family to self-destructive behavior, showing altered levels of serotonin metabolites in the cerebrospinal fluid of people who committed suicide. However, the WHO [1] considers that suicidal behavior may be an inherited psychiatric disorder and not a genetic predisposition. The most common psychiatric and psychological risk factors are depression, bipolar mood and affective state issues, schizophrenia, anxiety and personality disorders, alcohol abuse, hopelessness and loneliness, and comorbidities. Depressive diseases in their varied complexity, etiology and clinical presentation [4] are the most relevant risk factor for suicide.

Poisoning with stimulants such as cocaine, amphetamines, or alcohol are frequent predisposing factors for suicide and aggravating when someone is depressed. Anticonvulsants can also be associated with suicide and suicide attempts when there is a broad-spectrum indication for patients with psychiatric problems with or without psychiatric comorbidities, as has been warned by drug control global agencies, including the FDA [5].

The most relevant micro social factors for suicidal behavior are some life events that emotionally affect the individual: personal losses, violence, social isolation, interpersonal conflicts, interrupted or disturbed relationships, and legal or work issues. Also, physical and sexual abuse and problems with sexual orientation weigh heavily in childhood and adolescence. Authors point out the difficulties in relationships with parents, fights with boyfriends, and loneliness among young people, as will be seen in this review.

In his classic book "Suicide", published in 1897, Durkheim [6] highlights the social reasons for this act. He believes suicide is a symptom of social pathology and social disintegration. This phenomenon exists in all societies, although it differs from country to country, from time to time, and from an urban to a rural environment. The WHO [1, 3] divides the environmental factors associated with suicide into three categories: (1) life stressors: interpersonal conflicts, separations, rejections, losses, financial and work problems, and shame for something socially disapproved of; (2) ease of access to means that enable hanging, drowning, falling from a height, the use of firearms, and abuse of medications and poisons; and (3) exposure to spectacular cases, due to neighborhood or media effects.

The study on suicide and attempts by Brazilian researchers and especially by public health grew significantly in the first decade of the 2000s. In a survey carried out by Minayo et al. [7] on the country's production – related to violence and including self-inflicted deaths – until 1989, papers and theses on suicide did not reach ten publications. A second general review also on violence and health identified 32 works on suicide [8] from the 1990s to 1999. Many similar results are observed comparing the findings of a comprehensive review of 2017 [2] with the two previous studies of 1990 and 2003, such as the signs of self-destructive situations, the risk factors, and the methods used to trigger the self-inflicted death or for attempts to do so. However, advances are observed, particularly concerning the number of studies (73), a trend towards increasingly complex analyses and groups analyzed. Regarding professional categories, the highlights of the review presented in this chapter are police officers, bank workers, and rural producers, while medical students, domestic workers, and workers in the electrical network were found in the previous study. Most publications (40.8% of the total) address an overview of the issue, bringing its magnitude by age groups through local or national statistics; studies on risk factors, including socio-demographic factors, alcohol use, and mental disorders.

Data from the Surveillance System for Violence and Accidents (VIVA), the Forensic Medicine Institute (IML), health services, and epidemiological surveys are the primary sources of information. The second group of texts addresses children and adolescents (23.7%), where practically all publications concern adolescents. Next are documents about older adults (19.7%) and adults (15.8% of the total).

Besides the strong presence of epidemiology in studies on suicide and suicidal behavior, the following thematic lines are found in all groups analyzed in the collection: (1) attention from health services facing the problem, also addressing prevention strategies; (2) the biological component related to the suicide attempt; (3) the consequences of the phenomenon for health (in the case of attempts) and the suicide's family; and (4) the methodological aspects to study the theme.

The study on the magnitude and risk factors is the main focus of investigations. However, it is noteworthy that publications in public health and psychiatry journals suggest an interdisciplinary theoretical framework that covers clinical, environmental, and social aspects in understanding the phenomenon.

While Brazil is not a country with high suicide rates, when looking at the general data, we observe a growing trend and several niches in which this phenomenon is troubling: among young males, young adults, and older men. The problem is also more concentrated in some places, particularly in the south of the country, with the preeminence of municipalities in the inland Rio Grande do Sul and Santa Catarina. The rates are also relatively high in the Northeast, particularly in Piauí and in some cities in the region. The scarcely studied indigenous group deserves special attention, as the fatal suicide rate among young people reaches 17 cases per 100,000 inhabitants [2].

Given the theoretical framework exposed, this chapter aims to describe the magnitude of suicide self-inflicted injuries and suicide attempts and suicide mortality in Brazil, and point out prevention policies concerning this event, as recommended by the World Health Organization [3].

## **2. Methods**

A descriptive study was conducted with data referring to self-inflicted injury (which includes self-harm and suicide attempts) and suicide mortality in Brazil. The notifications of self-inflicted injuries were taken from the Surveillance

System for Violence and Accidents – continuous component, which is registered in the Notification System for Notifiable Violence (VIVA SINAN) from 2011 to 2019. In Brazil, the notification of interpersonal and self-inflicted violence became compulsory in 2011.

Data referring to the Mortality Information System (SIM) from 2000 to 2019, whose source is the Death Certificate, were used to analyze suicide mortality. Were selected deaths whose underlying cause was related to codes X60 to X84 (intentional self-harm) according to the International Classification of Diseases – 10<sup>th</sup> version (ICD-10).

Self-inflicted injury notifications were analyzed by gender, ethnicity/skin color, age, the federal unit of occurrence, whether the attempt had already happened before, suspected alcohol abuse, place of occurrence, and means used for self-harm.

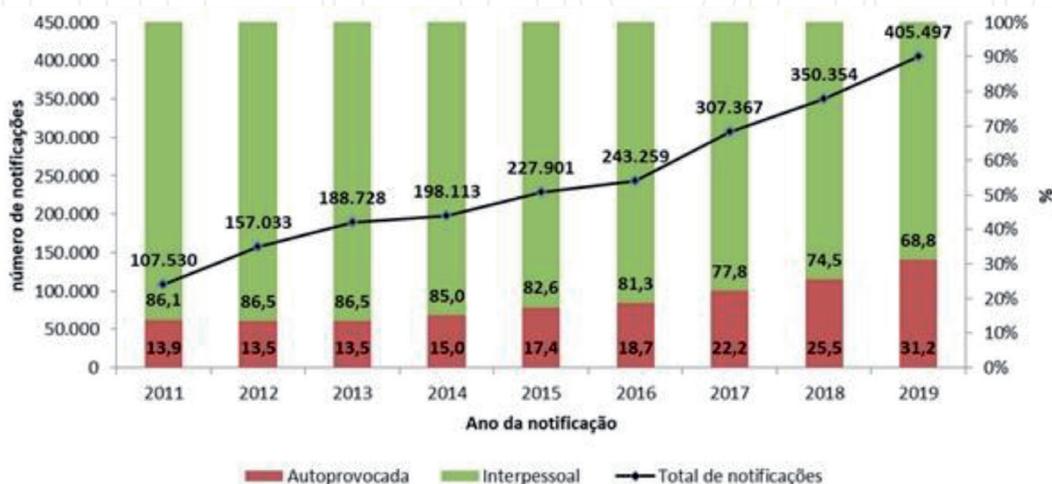
The completed suicides were analyzed by gender, age group, ethnicity/skin color, federated unit, and place of occurrence. Moreover, mortality rates (per 100 thousand inhabitants) were calculated employing the population data (Projected Brazilian Population by gender and simple age: 2000–2060), extracted from the website of the Informatics Department of the Unified Health System (DATASUS). All analyzed data is in the public domain.

### 3. Results

#### 3.1 Self-inflicted violence in Brazil

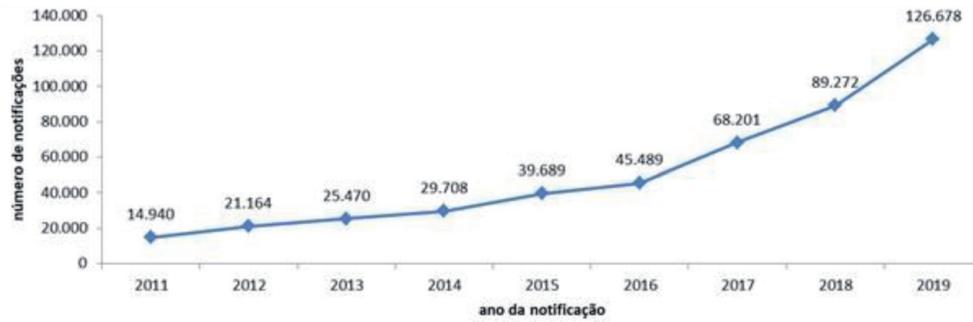
A total of 2,185,782 suspected or confirmed cases of violence (interpersonal and self-inflicted) were reported in Brazil from 2011 to 2019. Twenty-one percent (460,611) of these referred to self-inflicted violence (**Figure 1**).

During this period, cases of self-inflicted violence increased from 14,940 in 2011 to 126,678 in 2019, equivalent to a percentage variation of 728% (**Figure 2**). This increase in the phenomenon was observed in all Federative Units in the country (**Figure 3**) is due to ongoing work by the Ministry of Health's Coordination of Surveillance of Non-Communicable Diseases and Injuries to improve the notification process. Therefore, it suggests greater sensitivity and training of local teams to record injuries caused by violent events, including suicide attempts.

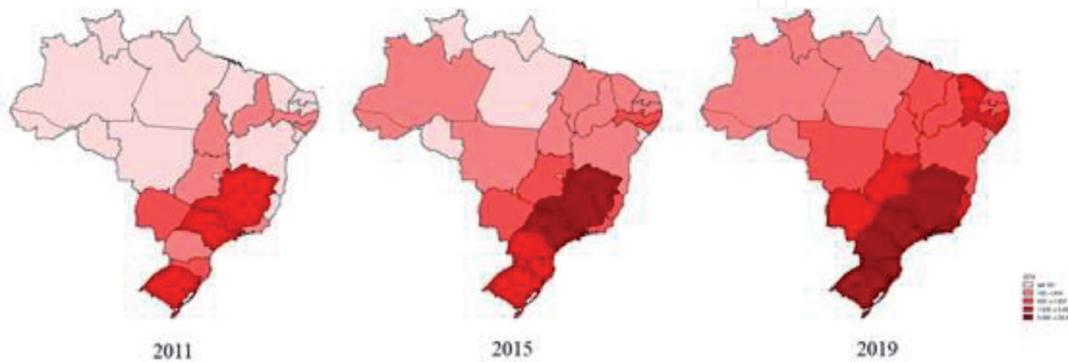


**Figure 1.**

*Distribution of notifications of interpersonal and self-inflicted violence by year of notification. Brazil, 2011 to 2019. Number of notifications, year of notification, self-inflicted, interpersonal, Total notifications. Source: VIVA/SINAN, Ministry of Health.*



**Figure 2.** Distribution of notifications of self-inflicted violence by year of notification. Brazil, 2011 to 2019. Number of notifications, year of notification. Source: VIVA/SINAN, Ministry of Health.



**Figure 3.** Distribution of notifications of self-inflicted violence by Federal Unit and year of notification. Brazil, 2011, 2015, and 2019. Source: VIVA/SINAN, Ministry of Health.

Throughout the period analyzed, self-inflicted violence involved mostly female individuals, corresponding to 64.9% of the cases reported in 2011 and 71.3% in 2019 (Figure 4).

Until 2015, about 50% of self-inflicted violence reported corresponded to individuals aged 20–39. From 2017 onwards, the most frequent age of cases involved adolescents aged 10–19, corresponding to 32.7% of notifications in 2019 (Table 1). Records of self-inflicted violence by older adults aged 60 or over showed an increase up to 2014, a year in which they accounted for 4.7% of the total. However, since then, a decline was observed, reaching 3.0% of notifications of self-inflicted violence in 2019 (Table 1).



**Figure 4.** Distribution of notifications of self-inflicted violence by gender and year of notification. Brazil, 2011 to 2019. Year of notification, male, female. Source: VIVA/SINAN, Ministry of Health.

|                 | Year of notification |      |      |      |      |      |      |      |      |
|-----------------|----------------------|------|------|------|------|------|------|------|------|
|                 | 2011                 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Age (years)     |                      |      |      |      |      |      |      |      |      |
| 0–9             | 0.0                  | 0.0  | 0.0  | 0.1  | 1.8  | 2.3  | 2.2  | 1.3  | 0.6  |
| 10–19           | 24.6                 | 24.8 | 24.8 | 23.9 | 22.5 | 23.6 | 27.9 | 29.8 | 32.7 |
| 20–29           | 29.1                 | 27.6 | 27.6 | 26.8 | 26.5 | 25.8 | 26.1 | 27.1 | 28.2 |
| 30–39           | 22.5                 | 22.5 | 22.3 | 23.1 | 22.4 | 21.9 | 19.6 | 19.2 | 18.1 |
| 40–49           | 13.5                 | 14.1 | 13.9 | 14.5 | 14.5 | 14.5 | 13.2 | 13.0 | 11.7 |
| 50–59           | 6.4                  | 6.7  | 7.0  | 7.0  | 7.6  | 7.4  | 7.0  | 6.3  | 5.5  |
| 60 and over     | 3.8                  | 4.4  | 4.3  | 4.7  | 4.6  | 4.3  | 4.0  | 3.3  | 3.0  |
| Unknown         | 0.0                  | 0.0  | 0.0  | 0.0  | 0.1  | 0.2  | 0.0  | 0.0  | 0.3  |
| Ethnicity       |                      |      |      |      |      |      |      |      |      |
| White           | 50.3                 | 51.3 | 50.0 | 49.7 | 47.9 | 48.5 | 50.0 | 49.4 | 47.1 |
| Black and brown | 31.8                 | 35.9 | 36.0 | 36.2 | 36.8 | 37.6 | 39.4 | 40.3 | 42.6 |
| Yellow          | 0.8                  | 0.8  | 0.6  | 0.7  | 0.6  | 0.6  | 0.7  | 0.7  | 0.7  |
| Indigenous      | 0.3                  | 0.4  | 0.8  | 0.7  | 0.7  | 0.6  | 0.6  | 0.6  | 0.6  |
| Unknown/Missing | 16.7                 | 11.7 | 12.6 | 12.6 | 14.0 | 12.6 | 9.3  | 9.0  | 9.0  |

*Source: VIVA/SINAN, Ministry of Health.*

**Table 1.**

*Distribution of self-inflicted violence reported by age group and ethnicity/skin color. Brazil, 2011 to 2019.*

White people have the highest proportions of self-inflicted violence throughout the period, corresponding to 50.3% of the cases reported in 2011 and 47.1% in 2019. However, flaws are observed in the registration of events. The percentage of cases with data on ethnicity/skin color registered as “unknown” represents more than 10% in the period (**Table 1**).

The record of repeated self-inflicted violence by the same individuals increased throughout the period, ranging from 27.2% in 2011 to over 40% of cases in 2019. Also, suspected alcohol use was identified in about 10% of the reported cases. The home was the most frequent place of suicide attempts, reaching 84.5% in 2019; this event on public highways had a declining trend in its frequency in the period, ranging from 7.6% in 2011 to 3.9% in 2019. The most frequent means of self-harm was poisoning, followed by sharp objects and hanging, which concentrated, respectively, 66.3%, 18.1%, and 7.0% of the cases reported in 2019 (**Table 2**).

### 3.2 Suicides in Brazil

A total of 195,047 deaths by suicide were recorded in Brazil from 2000 to 2019. The increase in the number of deaths of suicide was observed in all Federation Units (**Figure 5**). The rate of suicide deaths shows a slow but persistent growth between 2000 and 2019, ranging from 3.9 to 6.4 per 100,000 inhabitants, equivalent to a variation of 64% or more. When observed by gender, the rates for men are higher than for women and higher than the overall rate for the country, reaching 10.2 deaths per 100,000 inhabitants in 2019 (**Figure 6**).

To better understand the characteristics of these deaths, an analysis was carried out for the beginning (2000), the middle (2010), and the end of the observation period (2019). In 2000, the country had a mortality rate of 3.9 deaths per 100,000 inhabitants. In 2010, it increased to 4.8 deaths per 100,000 inhabitants and 6.4

|                              | Year of notification |      |      |      |      |      |      |      |      |
|------------------------------|----------------------|------|------|------|------|------|------|------|------|
|                              | 2011                 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| <b>Happened other times</b>  | 27.2                 | 29.0 | 28.9 | 30.2 | 30.8 | 32.3 | 35.0 | 37.2 | 41.0 |
| <b>Suspected alcohol use</b> | 18.8                 | 19.3 | 19.5 | 18.2 | 17.3 | 17.1 | 15.2 | 13.5 | 12.4 |
| <b>Place of occurrence</b>   |                      |      |      |      |      |      |      |      |      |
| Home/collective housing      | 76.9                 | 78.8 | 78.7 | 81.1 | 80.9 | 80.7 | 82.2 | 84.1 | 84.5 |
| Public highway               | 7.6                  | 7.8  | 7.4  | 6.4  | 6.1  | 6.1  | 5.3  | 4.0  | 3.9  |
| School/sports venue          | 1.0                  | 1.0  | 1.0  | 0.9  | 0.9  | 0.9  | 1.1  | 1.2  | 1.4  |
| Others*                      | 5.6                  | 5.2  | 5.7  | 5.2  | 5.0  | 4.8  | 4.2  | 3.3  | 3.1  |
| Unknown/Missing              | 8.9                  | 7.2  | 7.2  | 6.4  | 7.1  | 7.5  | 7.1  | 7.4  | 7.2  |
| <b>Means</b>                 |                      |      |      |      |      |      |      |      |      |
| Poisoning                    | 39.7                 | 41.6 | 41.0 | 43.2 | 45.6 | 50.1 | 52.6 | 59.1 | 66.3 |
| Hanging                      | 6.6                  | 7.0  | 7.1  | 8.0  | 7.1  | 6.8  | 6.8  | 6.9  | 7.0  |
| Sharp object                 | 10.1                 | 9.8  | 10.1 | 9.9  | 10.3 | 11.4 | 14.6 | 16.0 | 18.1 |
| Substance/Hot object         | 1.8                  | 1.6  | 1.6  | 1.4  | 1.5  | 1.5  | 1.2  | 1.1  | 1.0  |
| Firearm                      | 1.9                  | 1.9  | 2.1  | 1.9  | 1.5  | 1.4  | 1.1  | 0.6  | 0.6  |
| Bodily force                 | 13.9                 | 13.1 | 13.5 | 13.1 | 10.0 | 8.8  | 7.0  | 1.8  | 1.7  |
| Blunt object                 | 1.8                  | 1.5  | 1.7  | 1.5  | 1.5  | 1.5  | 1.6  | 1.3  | 1.5  |
| Threat                       | 3.2                  | 2.9  | 2.9  | 3.2  | 3.0  | 2.2  | 1.9  | 0.3  | 0.1  |

Source: VIVA/SINAN, Ministry of Health.  
 \*Other = Bars or similar; Trade/Services; Industries/construction; Others.

**Table 2.**  
 Distribution of self-inflicted violence reported by event-related characteristics. Brazil, 2011 to 2019.



**Figure 5.**  
 Distribution of completed suicide notifications by Federal Unit and year of notification. Brazil, 2011, 2015, and 2019. Source: SIM, Ministry of Health.

per 100,000 inhabitants in 2019. The highest frequency of deaths occurred among males at the beginning, middle, and end of the period. In 2019, the risk of suicide was 3.6 times higher among men than women.

The age group with the highest frequency of deaths from suicide in 2000, 2010 and 2019 was 20–29 years and concentrated 21% of all self-inflicted deaths in 2019. However, observing the rates by age, the rates among older adults aged 60 and over are expressive in 2000 and 2010 (7.0 and 7.3 deaths/100 thousand inhabitants, respectively), as well the rates among individuals aged 50–59 years in 2019 (reached 8.6 deaths/100 thousand inhabitants).

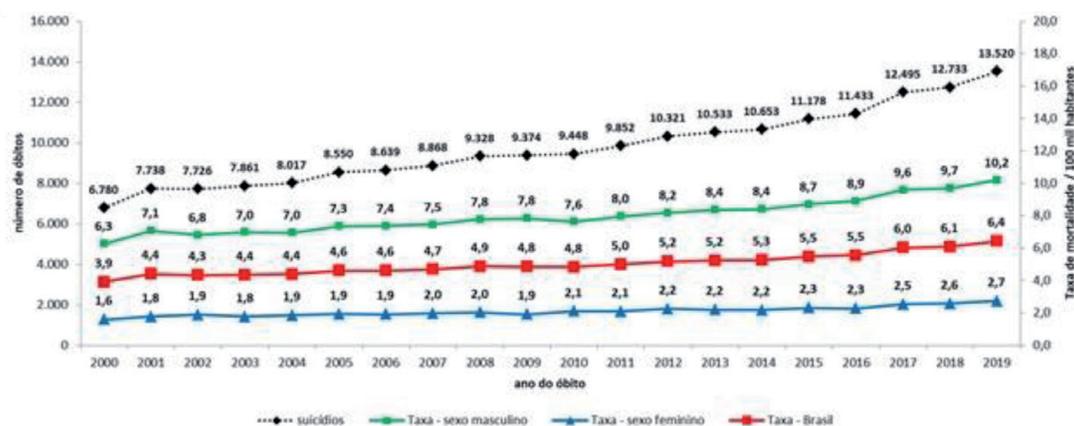


Figure 6.

Number of deaths and suicide mortality rate, by sex and year. Brazil, 2000–2019. Number of deaths, mortality rate/100 thousand inhabitants, year of death, suicides, rate – Male, rate – Female, rate – Brazil. Source: SIM, Ministry of Health.

|                                      | Year of death |      |      |      |      |      |
|--------------------------------------|---------------|------|------|------|------|------|
|                                      | 2000          |      | 2010 |      | 2019 |      |
|                                      | n             | Rate | n    | Rate | n    | Rate |
| <b>Gender</b>                        |               |      |      |      |      |      |
| Male                                 | 79.6          | 6.3  | 78.1 | 7.6  | 78.4 | 10.2 |
| Female                               | 20.4          | 1.6  | 21.9 | 2.1  | 21.6 | 2.7  |
| Unknown                              | 0.0           | —    | 0.0  | —    | 0.0  | —    |
| <b>Age (years)</b>                   |               |      |      |      |      |      |
| 0–9                                  | 0.0           | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 10–19                                | 9.0           | 1.7  | 7.5  | 2.1  | 9.0  | 3.7  |
| 20–29                                | 23.8          | 5.2  | 23.4 | 6.3  | 21.0 | 8.4  |
| 30–39                                | 21.5          | 5.6  | 21.1 | 6.6  | 20.4 | 8.0  |
| 40–49                                | 18.4          | 6.3  | 19.5 | 7.3  | 17.8 | 8.3  |
| 50–59                                | 12.3          | 6.6  | 13.1 | 6.7  | 14.8 | 8.6  |
| 60 and over                          | 14.7          | 7.0  | 15.1 | 7.3  | 17.0 | 8.1  |
| Unknown                              | 0.3           | —    | 0.3  | —    | 0.1  | —    |
| <b>Ethnicity</b>                     |               |      |      |      |      |      |
| White                                | 59.5          | —    | 51.3 | —    | 48.8 | —    |
| Black and brown                      | 30.8          | —    | 42.8 | —    | 48.7 | —    |
| Yellow                               | 0.6           | —    | 0.4  | —    | 0.2  | —    |
| Indigenous                           | 0.7           | —    | 1.0  | —    | 1.0  | —    |
| Unknown/white                        | 8.3           | —    | 4.6  | —    | 1.3  | —    |
| <b>Place of occurrence</b>           |               |      |      |      |      |      |
| Home                                 | 54.3          | —    | 56.8 | —    | 63.0 | —    |
| Hospital/other health establishments | 23.0          | —    | 21.4 | —    | 14.7 | —    |
| Public highway                       | 6.4           | —    | 6.8  | —    | 5.9  | —    |
| Others                               | 14.2          | —    | 14.3 | —    | 16.1 | —    |
| Unknown                              | 2.0           | —    | 0.7  | —    | 0.3  | —    |

Source: SIM, Ministry of Health.

Table 3.

Proportion and mortality rate from suicide by gender, age group, ethnicity/skin color, and place of occurrence. Brazil, 2000, 2010, and 2019.

Regarding ethnicity/skin color, more than 50% of deaths in 2000 and 2010 involved white individuals. However, in 2019, this frequency drops to 48.8% and is similar to the group of blacks and browns (48.7%). Moreover, the preferred place for committing suicide in Brazil has historically been the home (**Table 3**).

#### 4. Discussion

The results presented in this chapter show the magnitude of suicidal behavior in Brazil, which is known to have abuse and homicide among the most frequent types of violence. However, the sharp increase in attempted rates and the progressive increase in completed suicides raise a warning for the national situation. The data are somewhat similar to other countries, such as the male primacy of accomplished acts and the prevalence of attempts among women [1, 3]. Also, the underreporting of suicides and suicide attempts is recognized globally, mainly because of religious taboos and family conveniences underpinning its dynamics. Data from VIVA/SINAN show that notifications tend to increase year by year, which may help in an increasingly reliable analysis of this phenomenon in the country.

Aiming at preventing fatal acts, specialists point out that, both regarding attempted suicides and completed suicides, we should pay attention to (1) the complex nature of the phenomenon encompassing social, micro-social, psychological, medical, and environmental factors; (2) the predisposing factors such as severe and degenerative diseases, physical dependence, mental disorders and suffering, severe depression, violence, and social isolation; and (3) the differentiation of risk factors by gender and age. Given the abovementioned factors, we should reflect on some specificities related to the life cycle, mainly because they provide clues for the health sector's design of prevention and care strategies.

In childhood, suicidal behavior is rare in most societies. The World Health Organization reports worldwide death rates of 1.7 per 100,000 people for boys aged 5–14 years and 2 per 100,000 for girls in 2000 [1]. While the occurrences are few, the social dimension underlying the reasons that lead people in the formative stage and at such a young age to seek death is impactful. The importance of some associated factors is highlighted: conflicts between father and mother or between partners, deaths, separations, violent family environment in which there is a lack of communication and expression of feelings, social isolation, living with mental problems, living in a domestic space with alcohol and drug abuse, receiving corporal punishment and humiliation at home and school – even if it is to educate. In general, living in a communicative, affective family and community environment, respecting rights and feelings, loving and responsible reference adults protect children [2, 9].

In adolescence, suicide and attempts grow significantly against the childhood period, especially after 15. The main risk factors for both attempts and self-inflicted death are: suffering physical violence, sexual abuse, and threats from peers or others; depression; having gender identity problems; experiencing unrequited love; being in social isolation; having problems with school performance and communication with teachers and peers; suffering emotional, family, social and cultural frustration; having contact with cases of relatives, neighbors, and colleagues who killed themselves [2, 10–12]. In general, in the attempts, medication intake is the most used means to self-harm, and the age for the most significant risk is 14.

Twenty-two suicides per day occur in the country among adults. The proportion of men (79.79%) is much higher than women, and the young adult age group is the most vulnerable. The most important risk factors for women are marital and sexual violence, rape, unwanted pregnancy, depression, and mental disorders [2, 13, 14]. Men's predisposing factors are associated with the world of work, alcoholism,

loneliness, isolation, and mental problems [2, 15]. Regarding labor activity, cases of poisoning by pesticides among farmers [16] and medication among physicians and medical students are known [2, 17], caused by firearm among police officers [2, 18, 19] and by several means among bank employees [2, 20].

In old age, almost five deaths per day were found in 2018. A significant under-reporting of suicide is observed in this period of life, as when the number of attempts is lower than that of completed suicide in that same year. According to national and international studies, there is at least a ratio of four attempts for each suicide committed in this stage of life [21]. As associated factors, the authors cite, in general, severe depression, social isolation, loss of meaning in life, loss of children and spouses, severe and degenerative diseases, economic and affection deprivation, inactivity, and experiences of violence in the past and current life [2, 22–24].

Suicide prevention strategies and suicidal behavior are very recent in Brazil. These were not considered a relevant problem for the Ministry of Health, although local groups, particularly in mental health, have been active regarding this issue that requires a multidisciplinary approach [25]. In 2005, the Ministry of Health began a series of actions to reduce the number of deaths, attempts, and associated harm, driven by the WHO guidance, which has committed to reducing the number of suicides in the world since 1990.

The National Strategy for the Prevention of Suicide (ENPS) stands out among the Brazilian initiatives. It was established by Ordinance N° 1.876, of August 14, 2006, and its guidelines follow the recommendations of the WHO Multisite Intervention Study on Suicidal Behaviors (SUPRE-MISS) directed to health professionals. Some of the outstanding recommendations for caring for people at risk of suicide are: (1) establishing a relationship of trust and listening cordially to individuals in a self-destruction crisis; (2) treating individuals with respect and empathy and keeping their manifestations confidential; (3) having a compassionate attitude to recognize signs of hopelessness and past attempts; (4) identifying that people with a family history of suicide, previous attempts, psychiatric disorder, depression, alcoholism are at risk; (5) talking openly to individuals who express a desire to kill themselves, believing what they express; and (6) becoming technically capable of distinguishing between low, medium, and high-risk levels.

WHO emphasizes one should not ignore the situation and signs of suicide attempts, be in a state of shock or panic at hearing these manifestations, put in mitigations, say that everything will be fine and that the problem will resolve itself, challenge individuals to go ahead, give false assurances, swear to secrecy, and leave high-risk individuals alone.

The document on the National Strategy for the Prevention of Suicide (ENPS), which can be found at <http://www.portaldasauade.pt/NR/rdonlyres/BCA196AB-74F4-472B-B21E>, recommends: (1) increasing information and social awareness about the problem; (2) training health professionals to provide comprehensive care in PHC units and Psychosocial Care Centers, in Urgent and Emergency Care Services, and in General Hospitals; (3) expanding access of the population at most significant risk to SUS health services; (4) encouraging studies and research on the subject; (5) improving reporting on mortality and attempts; (6) fostering and supporting local primary and secondary prevention programs; and (7) reducing access to lethal means.

The Ministry of Health also encourages and supports civil society initiatives that carry out actions to protect and prevent suicide, such as those developed by the Center for the Valorization of Life (CVV) has been operating since 1962, offering care to people who are suffering and try to kill themselves through the telephone number 141 and the website: [www.cvv.org.br](http://www.cvv.org.br). Given the delicacy of the problem and the taboos that surround it, the safety network for people at risk for suicide should constantly be in the process of formation and action. National and international

surveys show that at least two-thirds of people who attempted or committed suicide had communicated their intention to take their own life in some way to friends, family, acquaintances, or healthcare professionals.

Brazil has several guidance materials for the most distinguished professionals to work in suicide prevention. Besides the two mentioned above, we mention a few that follow the WHO guidelines: (1) the National Plan for the Prevention of Suicide by the Ministry of Health; (2) a manual for Mental Health professionals; (3) a manual for teachers and educators; (4) a manual for general practitioners; (5) a media orientation manual; (6) a manual for the prevention of suicide in older adults. However, concrete prevention initiatives that usually mobilize all social forces and public authorities are only available in the country's southern region, where self-inflicted deaths are dire. In other locations, suicide prevention is still in its infancy and does not sensitize social conscience.

## 5. Final considerations

The situation presented here shows that it is impossible to underestimate suicide, a severe public health issue, which is violence that kills the most globally. However, it is noteworthy that both the studies and the prevention actions focusing on this problem are very preliminary, unspecific, and not focused on practical action. Future studies should care on situational analyses of locations where the risk is higher and discuss preventive and intersectional care strategies between health, social assistance, family support, and public safety services.

It is important to emphasize that, even with the availability of various types of guidance, we observed in the evaluation of services that Brazilian health professionals are still very poorly prepared to act effectively in the prevention of suicidal behavior and thus avoid so many deaths and injuries. Therefore, it is crucial to invest in training agents and the proper organization of PHC, mental health, and specialized services.

Gaps must also be filled, as is the case with the deteriorating phenomenon by groups of age and gender (including the LGBTQ+ population) because suicide affects childhood and adolescents and decimates Indigenous youth. Unconventional sexual orientation is often a risk factor for self-harm and death. As Hannah Arendt [26] recalls, violence (which includes suicide) dramatizes social causes that are unbearable for those trying to kill themselves. However, it is essential to stick with the World Health Organization's call: "It is imperative to prevent suicide!" [3].

### Author details

Maria Cecília de Souza Minayo and Camila Alves Bahia\*  
Ministry of Health, Brasília, Brazil

\*Address all correspondence to: [calvesbahia@gmail.com](mailto:calvesbahia@gmail.com)

### IntechOpen

© 2021 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. 

## References

- [1] Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R. *World Report on Violence and Health*. Gêneve: WHO; 2002.
- [2] Minayo MCS, Avancini JQ, Figueiredo AEB. Revisão compreensiva sobre a produção científica a respeito do suicídio no Brasil (2001-2013). In: Minayo MCS, Assis SG, organizadores. *Novas e velhas faces da violência no século XXI: visão da literatura brasileira do campo da saúde*. Rio de Janeiro: Editora Fiocruz, 2017.p. 81-95.
- [3] World Health Organization (WHO). *Preventing suicide: a global imperative*. Gêneve: WHO; 2014.
- [4] Cavalcante FG, Minayo MCS, Mangas RMN. Diferentes faces da depressão no suicídio em idosos. *CienSaude Coletiva* 2013;18(10):2885-2895. doi: 10.1590/S1413-81232013001000023
- [5] Food and Drug Administration (FDA). *US Departamento of Health & Human Services*. 2010. [accessed 2021 May 25th]. Disponível em: [www.fda.gov](http://www.fda.gov).
- [6] Durkheim E. *Suicide. A Century of Research and Debate*. New York; Routledge Press; 2000.
- [7] Minayo MCS, Souza ER, Assis SG. *Bibliografia comentada sobre violência e saúde*. Rio de Janeiro: Editora Panorama; 1990.
- [8] Minayo MCS, Souza ER. *Violência sob o olhar da saúde: a infrapolítica da contemporaneidade brasileira*. Rio de Janeiro: Editora Fiocruz; 2003.
- [9] Bruffaerts R. Childhood adversities as risk factors for onset and persistence of suicidal behaviour. *The British Journal of Psychiatry*. 2010;197(1):20-27. doi: 10.1192/bjp.bp.109.074716.
- [10] Evans E. The prevalence of suicidal phenomena in adolescents: a systematic review of population-based studies. *Suicide and Life-Threatening Behavior* 2005; 35(3):239- 250. doi: 10.1521/suli.2005.35.3.239.
- [11] Werlang BSG, Borges VR, Fensterseider L. Fatores de risco ou proteção para a presença de ideação suicida na adolescência. *RevInteramericana de Psicologia* 2005;39(2):259-266. doi:<https://www.redalyc.org/articulo.oa?id=28439210>
- [12] Baggio L, Palazzo LS. Planejamento suicida entre adolescentes escolares: prevalência e fatores associados. *Cad. Saúde Pública* 2009; 25(1):142-150. doi:10.1590/S0102-311X2009000100015
- [13] Ceccon RF. *Mulheres que vivem com HIV: violência de gênero e ideação suicida*. 2013 [mestrado]. Porto Alegre: Universidade Federal do Rio Grande do Sul; 2013.
- [14] Devries K, Watts C, Yoshihama M, Kiss L, Schraiber LB, Deyessa N, et al. Violence against women is strongly associated with suicide attempts: evidence from the WHO multi-country study on women's health and domestic violence against women. *Social Science & Medicine* 2011;73(1):79-86. doi: 10.1016/j.socscimed.2011.05.006.
- [15] Ponce JC, Andreuccetti G, Jesus, MGS, Leyton V, Muñoz R. Álcool em vítimas de suicídio em São Paulo. *Rev Psiquiatria Clínica* 2008; 35(1):13-16. doi:10.1590/S0101-60832008000700004
- [16] Pires DX, Caldas ED, Recena MCP. Uso de agrotóxicos e suicídios no Estado de Mato Grosso do Sul, Brasil. *Cad. Saúde Pública* 2005;21(2):598-605. doi:<https://core.ac.uk/download/pdf/190030261.pdf>
- [17] Santa ND, Amaury CA. A Review of literature on suicide among doctors and medical students. *Rev Brasileira de Educação Médica* 2016; 40(4):772-780.

doi: 10.1590/1981-52712015v40  
n4e00262015

[18] Miranda D. *Por que os policiais se matam?* Rio de Janeiro: Mórula Editorial; 2016.

[19] Nogueira GEG. *Tentativas de suicídio entre policiais militares: um estudo em saúde mental e trabalho* [mestrado]. Belo Horizonte: Universidade Federal de Minas Gerais; 2009.

[20] Finazzia M. *Patologia da solidão: o suicídio de bancários no contexto da nova organização do trabalho* [mestrado]. Universidade de Brasília, Brasília; 2009.

[21] Minayo MCS, Cavalcante FG. Suicide in elderly people: a literature review. *Rev Saúde Pública* 2010; (44):750-757.  
doi:10.1590/S0034-89102010000400020

[22] De Leo D, Padoani W, Scocco P, Lie D, Bille-Brahe U, Arensman E, et al. Attempted and completed suicide in older subjects: results from the WHO/EURO Multicentre Study of Suicidal Behaviour. *International Journal of Geriatric Psychiatry* 2001;16(3):300-310.  
doi: 10.1002/gps.337.

[23] Beautrais AL. A case-control study of suicide and attempted suicide in older adults. *Suicide and Life – Threatening Behavior* 2002;32(1):1-9.

[24] Conwell Y. Challenges to preventing suicide in later life. *Cien Saúde Colet* 2015; 20(6):652-653. doi:  
10.1590/1413-81232015206.19962015

[25] Mann JJ, Apter A, Bertolote J, Beautrais A, Currier D, Haas A, et al. Suicide prevention strategies: a systematic review. *Journal of the American Medical Association* 2005;294(16):2064-2074. doi:10.1001/jama.294.16.2064

[26] Arendt H. *On violence*. New York: Mariner Books; 1970.