Original article

Suicide mortality in Bahia in the 15-29 age group, from 2011 to 2023

Mortalidade por suicídio na Bahia na faixa etária de 15 a 29 anos, de 2011 a 2023

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ABSTRACT | OBJECTIVE: To describe the sociodemographic profile of suicide deaths in Bahia, in the age group of people from 15 to 29 years old, from 2011 to 2023. **METHODS:** This is a descriptive, quantitative study with secondary data obtained from the Sistema de Superintendência de Vigilância e Proteção da Saúde do Estado da Bahia – SUVISA (Health Surveillance and Protection Superintendence System). Suicides by residence, reported by Núcleos Regionais de Saúde (Regional Health Centers), were analyzed using the following variables: sex, age group, race/skin color, and marital status. For data tabulation and descriptive analysis, Microsoft Office Excel 2023 was used. **RESULTS:** A total of 2,080 suicide deaths were reported in Bahia. The regions with the largest population size stand out: East 20.2 0%, Southwest 16.0%, and Central East 13,7%. Regarding race/ skin color, suicides were more frequent among people of mixed-race, representing 73,4% of the total. For all regions, suicides among single individuals exceeded those of other marital statuses, for both sexes. **CONCLUSION:** An unequal distribution of self-inflicted deaths was observed in relation to both geographic location and the variables of sex, race/skin color, and marital status.

KEYWORDS: Mortality. Suicide. Secondary Data Analysis.

RESUMO | OBJETIVO: Descrever o perfil sociodemográfico das mortes por suicídio na Bahia, na faixa etária de 15 a 29 anos, no período de 2011 a 2023. **MÉTODOS:** Trata-se de uma pesquisa descritiva, quantitativa, com dados secundários, obtidos no Sistema de Superintendência de Vigilância e Proteção da Saúde do Estado da Bahia (SUVISA). Foram analisados os suicídios por residência, notificados por Núcleos Regionais de Saúde, utilizando-se como variáveis: sexo, faixa etária, raça/cor e estado civil. Para a tabulação dos dados e análise descritiva foi utilizado o programa Microsoft Office Excel 2023. **RESULTADOS:** Foram notificadas um total de 2080 mortes por suicídio na Bahia. Destacam-se os Núcleos com maior porte populacional, sendo: Leste 20,2%, Sudoeste 16,0% e Centro Leste 13,7%. No quesito raça/ cor, os suicídios foram mais frequentes em pessoas pardas, chegando a representar 73,4% do total. Para todos os Núcleos, os suicídios de solteiros superaram os demais estados civis, em ambos os sexos. **CONCLUSÃO:** Observou-se uma distribuição desigual dos casos de mortes autoprovocadas tanto em relação à localização geográfica, quanto às variáveis de sexo, raça/cor e estado civil.

PALAVRAS-CHAVE: Mortalidade. Suicídio. Análise de Dados Secundários.

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1. Introduction

Suicide, etymologically defined as the act of killing oneself, is considered a global public health problem. This is due both to the complexity of the act and to the increasingly alarming numbers of self-inflicted deaths[1]. The high and worrying numbers of self-inflicted deaths place suicide as the second largest cause of death worldwide, especially in the young population aged 15 to 29 years old, in both sexes[2].

In the international scenario, there is one suicide every 40 seconds, and for each suicide a number of 20 or more attempts[2]. In 2020, the burden of suicide attempts, and their associated morbidity increased by approximately 2.4% worldwide[3]. Currently, in the ranking of countries with more cases of death by suicide, there is at least one country from each continent of the world, and these numbers appear with greater proportions every year[2]. As an example, the population survey conducted with suicide rates in Japan and South Korea between 1985 and 2010 showed that both countries had high numbers of self-inflicted deaths[4]. Over the past 45 years, global suicide mortality rates have increased by 60%, especially in the Republic of Korea and Trinidad and Tobago due to high suicide figures[1]. In the United States of America, suicide rates increased by about 16% between the years 2006 and 2014[5].

In Brazil, the number of deaths by suicide does not differ from the international scenario, placing the country in the 8th position worldwide for the highest suicide indexs[6]. The total number of suicides, in the period from 2002 to 2012, went from 7,726 to 10,321, representing an increase of 33.6% of self-inflicted deaths. These reached rates three times higher than the growth of the Brazilian population in the same period, which largely exceeds mortality due to homicides and traffic accidents — with 2.1% and 24.5%, respectively. Among the regions, the growth in the number of suicides in the North and Northeast is noteworthy, led by the states of Bahia and Paraíba[7].

Although the worrying numbers of suicide, experts from different professional categories claim that more than half of deaths can be prevented, as long as we talk about death with less taboo. This is because death and dying, especially self-provoked, refers to discriminatory labels about madness or exaggerated ways of calling for attention[8]. Such propositions, in addition to hindering understanding of the aggravating factors, have repercussions on the development of public policies around suicide prevention, accentuated risk factors in the biopsychosocial context[9].

Often, even in health education, there is little or no information about death and the process of dying, including suicide mortality. In this context, attention is drawn to the suicide act, which despite the alarming numbers, still seems to cover up stigma and fear in society in general.

It is hoped that this study will contribute to greater information about the subject of suicide among health academics and in the general population, as well as to the direction of public health policies.

Thus, it is presented as a research question: what is the sociodemographic profile of suicide deaths in Brazil, from 2011 to 2023? To answer the question, the objective is: describe the sociodemographic profile of suicide deaths in Bahia, from 2011 to 2023.

2. Methods

This is a descriptive research, quantitative approach to time series, with secondary data, obtained in the Sistema de Superintendência de Vigilância e Proteção da Saúde do Estado da Bahia – SUVISA (Health Protection and Surveillance System), of the Secretaria de Saúde da Bahia – SESAB (Department of Health of Bahia). This database is the product of the unification of more than forty death certificate models used over the years to collect data on mortality in the country. It is also one of the main instruments to support the development of more effective public health and social security policies aimed at prevention, promotion and care in health[10].

In view of the great territorial extension of Bahia and with the aim of favoring the search for data in SUVISA, suicides by residence were analyzed. Bahia also draws attention for its population contingent, as the most populous state of the Northeast Bank, with 14,141,626 inhabitants, 51.7% for women and 48.3% for men, according to the 2022 census[11]. Data were collected in May 2024 and as a criterion for analysis, the following variables were used: sex (male and female), age group (15 to 29 years old), race/skin color (white, black, yellow, brown and indigenous) and marital status (single, married, widowed and divorced).

The time cut occurred from the years 2011 to 2023. Access is justified from 2011, because it is the year of inclusion of self-provoked violence as an immediate or compulsory notification offence, as defined in Portaria (Ordinance) N. 104 from January 25th, 2011[12].

Data were coded according to the large group of International Statistical Classification of Diseases and Health-related Problems, 10th revision (ICD-10), using deaths from self-inflicted injuries voluntarily (X60 – X84). For the tabulation of data and descriptive analysis was used the program Microsoft Office Excel 2023.

The data collection by the SUVISA portal followed the following steps: epidemiological surveillance, health information/TABNET, within this information, the topic mortality followed by deaths from external causes. In the line dimension are the municipalities of Bahia; in the columns, the years of death occurrence; and as content, the number of deaths by place of residence, covering the historical series from 2011 to 2023. For the large group of International Classification of Diseases (ICD-10) were selected from X60-X84, identified as self-inflicted lesions.

There is no need to submit this study to the Research Ethics Committee because it is a research from access to official data in the public domain.

3. Results

In the period analyzed, from 2011 to 2023 a total of 2080 deaths by suicide were reported in Bahia. The Regions with higher population size stand out, being: East (20.2%), Southwest (16.0%) and Central-East (13.7%), according to table 1.

Table 1. Frequency of mortality from suicide in the Núcleos Regionais de Saúde (Health Regional Centers) from 2011 to 2023, 15-29 age group (N=2080)

Health Regional Centers	n	%
HRC Central-East	283	13.7
HRC Central-North	207	10.0
HRC Far South	115	5.5
HRC East	419	20.2
HRC Northeast	126	6.1
HRC North	219	10.5
HRC West	138	6.6
HRC Southwest	332	16.0
HRC South	236	11.3
Ignored	5	0.1
Total	2080	100.0

Source: SUVISA (2024).

When comparing deaths by sex, attention is drawn to the disproportion between male and female sex, with 1,663 suicides reported for males and 417 for females. Which corresponds to four male deaths for one female. The Regions East (19%), the Southwest (19%) and the Central-East, which together account for almost 50% of the total number of suicides (Table 2).

Table 2. Frequency of mortality from suicide in the Health Regional Centers by sex, from 2011 to 2023 (N=2080)

Health Regional Centers	Male		Female	
	n	%	n	%
HRC Central-East	235	14.1	48	11.5
HRC Central-North	179	10.8	28	6.7
HRC Far South	91	5.5	24	5.8
HRC East	317	19.1	102	24.5
HRC Northeast	98	5.9	28	6.7
HRC North	176	10.6	43	10.3
HRC West	105	6.3	33	8.0
HRC Southwest	269	16.2	63	15.0
HRC South	190	11.4	46	11.0
Ignored	3	0.1	2	0.5
Total	1663	100	417	100

Source: SUVISA (2024).

In terms of race/skin color, self-inflicted deaths in Bahia were more frequent among brown people (1,527) accounting for 73.4% of the total (Table 3).

Table 3. Frequency of mortality from suicide in the Health Regional Centers by race/skin color, from 2011 to 2023 (N=2080)

Health Regional Centers	White		Black		Yellow		Brown		Indigenous	
	n	%	n	%	n	%	n	%	n	%
HRC Central-East	25	11.5	35	13.3	0	0.0	213	14.0	1	33.0
HRC Central-North	22	10.0	13	5.0	2	28.6	163	10.7	0	0.0
HRC Far South	9	4.0	7	2.7	1	14.2	90	5.9	3	67.0
HRC East	52	24.0	83	32.0	0	0.0	279	18.3	0	0.0
HRC Northeast	8	3.7	14	5.3	0	0.0	103	6.7	0	0.0
HRC North	21	9.7	13	5.0	0	0.0	181	11.9	0	0.0
HRC West	11	5.2	25	9.5	0	0.0	100	6.5	0	0.0
HRC Southwest	49	22.6	47	17.0	2	28.6	221	14.5	0	0.0
HRC South	19	8.8	26	9.8	2	28.6	175	11.5	0	0.0
Ignored	1	0.5	1	0.4	0	0.0	2	0	0	0.0
Total	217	100	264	100	7	100	1527	100	4	100

Source: SUVISA (2024).

Concerning the marital status of people who committed suicide, the Southwest region presents a highlight among singles, married and divorced, with the highest percentages. For all Regions, the suicides of single people exceeded the other marital status, in both sexes (Table 4).

Table 4. Mortality from suicide in the Health Regional Centers and marital status, from 15 to29 years old, from 2011 to 2023 (N=2080)

Health Regional Centers	Single		Married		Widowed		Divorced	
	n	%	n	%	n	%	n	%
HRC Central-East	240	14.0	11	11.8	0	0.0	0	0.0
HRC Central-North	165	9.6	10	10.7	0	0.0	0	0.0
HRC Far South	88	5.0	3	3.2	0	0.0	2	15.4
HRC East	376	22.0	17	18.3	1	100.0	3	23.0
HRC Northeast	104	6.1	6	6.5	0	0.0	0	0.0
HRC North	182	10.7	9	9.7	0	0.0	1	7.7
HRC West	90	5.3	5	5.4	0	0.0	2	15.4
HRC Southwest	252	14.8	26	28.0	0	0.0	5	38.5
HRC South	213	12.4	6	6.4	0	0.0	0	0.0
Ignored	2	0.1	0	0.0	0	0.0	0	0.0
Total	1,712	100	93	100	1	100	13	100

Source: SUVISA (2024).

4. Discussion

Through the analysis of the annual series from 2011 to 2023, Bahia presented a total of 2080 deaths by suicide in the age group 15-29 years, considering the nine Núcleos Regionais de Saúde (Regional Health Centers). Men die more by suicide than women, in a ratio of 4:1. Black and brown people account for almost 90% of self-inflicted deaths, with a marked difference also for singles (82.3%), when compared to married, widowed or divorced.

According to the World Health Organization (WHO) suicide has become a global epidemic, with one person dying from suicide every 40 seconds. These data show that this phenomenon leads to the death of more than 800,000 people annually, with 75% of cases occurring in developing and poor countries[11].

Although Bahia occupies a high position in the ranking of female growth — percentage of 2.3% between 2010 and 2022[12] — men are more vulnerable to suicide. Corroborating, an epidemiological bulletin published in 2021 points out that men have a higher risk for suicide, while women have higher prevalence of ideation and attempts to suicide[13]. This may be related to the difference in methods between genders. An ecological study that evaluated the frequency of suicides in Brazil in the age group from 14 to 65 years with data reported in the Sistema de Informação sobre Mortalidade (Mortality Information System) identified hanging (74.7%) as the most prevalent among men, followed by firing of firearms (8.0%)[14]. Men are also more sensitive to economic instabilities such as unemployment and impoverishment, factors that can lead to suicide[15,16].

Considering the race/skin color variable, for both males and females, the black and brown population accounted for more than 90% of suicide deaths. According to the Instituto Brasileiro de Geografia e Estatística – IBGE (Brazilian Institute of Geography and Statistics), the black population consists of individuals who claim to be black or brown, defining themselves as race/skin color that refers to traits and individual particularities. In the 2022 Demographic Census, the brown population became the majority in Brazil, representing 45.3% (92.1 million people) of the country's total population, surpassing for the first time since the creation of the census the white population, which rose to 43.5% (88.7 million)[17].

Understanding racism as a structural process, a study conducted in Vilhena, Rondônia, demonstrated that suicide and self-inflicted injuries are associated with racial and social inequalities that, as in the rest of Brazil, affect young black people more directly[18]. In this scenario, black and poor people, especially males, experience the marginalization and historical heritage of social exclusion that makes them vulnerable to the most diverse situations and health problems, such as addiction to chemical substances, depression and even suicide. Thus, it is observed that social determinants are related to suicidal behavior, either by structural violence and its relationship with colonialism, or by discrimination, marginalization and exclusion that perpetuate until the present time[19,20].

It is important to note that the ways of getting sick and dying of the black population reflect contexts of vulnerability that are expressed in health inequities[21]. The discrimination of the black population in the health units, both as users and professionals, is notorious. The lack of information in the completion of the race/skin color question in the notification forms of diseases symbolizes an important marker for the prevention of preventive or curative benefits of treatments and medicines made possible by public health policy[22].

Regarding marital status, the data showed that being single corresponded to almost 94% of suicide mortality cases. A Mexican study on the analysis of sociodemographic factors related to suicide attempts in the population showed that not being in a stable or married relationship can lead to a greater propensity for suicide attempts[23]. Corroborating, research on the profile of mortality from homicides and suicides in men in the hinterland of Pernambuco, developed at the Instituto de Medicina Legal de Petrolina, evidenced the prevalence of single marital status in both causes of death, represented by 78.8% of homicides and 64.2% of suicides[24].

In general, violent deaths, present globally, especially affect Latin American countries, and the profile of the victims is often of little age[25]. Through discussions on masculinity, associated with those of a socio-political aspect, it is possible to identify appropriate tools for the process of implementing public policies that enable changes in the context of mortality profiles[26].

This study has limitations because it is derived from secondary data, with information that may present inaccuracies and inconsistencies in the records of interest of the research data.

5. Conclusion

In summary, the study revealed the magnitude of suicide mortality in Bahia, especially among young male, brown and single individuals, from 2011 to 2023. Having a stable relationship and building a family suggests a protective factor about suicide, considering the total number of deaths in the absence of affective ties for both sexes.

Producing information that can give visibility to this public health problem among black people is an extremely necessary and urgent activity, which is made possible by the completion of the race/skin color question in the information systems of diseases.

The data presented reinforces the need to formulate public policies aimed at promoting life, with a multidisciplinary approach through surveillance and care, including issues of gender, race/color, and socioeconomic conditions.

Authors' contributions

The authors declared that they have made substantial contributions to the work in terms of conception or design of the research; acquisition, analysis, or interpretation of data for the work; and drafting or critically revising it for relevant intellectual content. All authors approved the final version to be published and agree to take public responsibility for all aspects of the study.

Competing interests

No financial, legal, or political conflicts involving third parties (government, private companies and foundations, etc.) have been declared for any aspect of the submitted work (including but not limited to grants and funding, advisory board membership, study design, manuscript preparation, statistical analysis, etc.).

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References

1. World Health Organization. Preventing suicide: a global imperative. Geneva: World Health Organization; 2014. Available from: https://iris.who.int/bitstream/handle/10665/131056/9789241564779_eng.pdf?sequence=1

2. World Health Organization. Suicide: one person dies every 40 seconds. Geneva: World Health Organization; 2019. Available from: https://www.who.int/news/item/09-09-2019-suicide-one-person-dies-every-40-seconds

3. Silveira RA, Santos AS, Ferreira LA. Impact of morbi-mortality and expenses with suicide in Brazil from 1998 to 2007. R Pesq Cuid Fundam Online. 2012;4(4):3033-42. https://doi.org/10.9789/2175-5361.2012.v4i4.3033-3042

4. Jeon SY, Reither EN, Masters RK. A population-based analysis of increasing rates of suicide mortality in Japan and South Korea, 1985-2010. BMC Public Health. 2016;16:356. https://doi.org/10.1186/s12889-016-3020-2

5. Hedegaard H, Curtin SC, Warner M. Suicide rates in the United States continue to increase. NCHS Data Brief [Internet]. 2018;(309):1-8. Available from: https://www.cdc.gov/nchs/products/databriefs/db309.htm

6. Ministério da Saúde. Agenda de Ações Estratégicas para a Vigilância e Prevenção do Suicídio e Promoção da Saúde no Brasil: 2017 a 2020. [Internet]. Brasília: Ministério da Saúde; 2017. Available from: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/cartilhas/2017/17-0522-cartilha-agenda-estrategica-publicada-pdf/view

7. Waiselfisz JJ. Mapa da violência 2014: os jovens do Brasil [Internet]. Brasília: Flacso Brasil; 2014. Available from: https://biblioteca.flacso.org.br/files/2020/03/Mapa2014_JovensBrasil.pdf

8. Santos WS, Ulisses SM, Costa TM, Farias MG, Moura DPF. The influence of risk or protective factors for suicide ideation. Psicologia Saúde Doença [Internet]. 2016;17(3):515-26. Available from: https://www.redalyc.org/pdf/362/36249164016.pdf

9. Ferreira KG, Gonçalves MV. The students' perspective on suicide approach during Occupational Therapy training. Cad Bras Ter Ocup. 2018;26(4):883-91. https://doi.org/10.4322/2526-8910.ctoAO1610

10. Superintendência de Vigilância e Proteção da Saúde do Estado da Bahia. [Internet]. Salvador: Secretaria da Saúde do Estado da Bahia. Available from: https://www.saude.ba.gov.br/suvisa/superintendencia-de-vigilancia-e-protecao-da-saude-do-estado-da-bahia/

11. Banco do Nordeste. Censo demográfico 2022: primeiros resultados [Internet]. Fortaleza: Banco do Nordeste; 2023. Available from: https://www.bnb.gov.br/s482-dspace/bitstream/123456789/1791/3/2023_CDPR_GERAL.pdf

12. Ministério da Saúde. Notificação de violências interpessoais e autoprovocadas. [Internet]. Brasília: Ministério da Saúde; 2017. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/notificacao_violencias_interpessoais_autoprovocadas.pdf

13. Ministério da saúde. Boletim Epidemiológico 33: Mortalidade por suicídio e notificações de lesões autoprovocadas no Brasil [Internet]. Brasília: Ministério da Saúde; 2021. Available from: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/boletins/epidemiologicos/edicoes/2021/boletim_epidemiologico_svs_33_final.pdf

14. Palma TF, Teixeira JRB, Bandini MCD, Lucca SR, Araújo TM. When the only solution is death: suicide among male and female workers in Brazil. Cien Saude Colet 2024;29:e00922023. https://doi.org/10.1590/1413-81232024291000922023

15. Ribeiro JF, Mascarenhas TB, Araújo ACBS, Coelho DMM, Branca SBP, Coelho DMM. Sociodemographic profile of suicide mortality. Rev enferm UFPE on line [Internet]. 2018;12(1):44-50. Available from: https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/25087/25845

16. Machado DB, Santos DN. Suicide in Brazil, from 2000 to 2012. J Bras Psiquiatr. 2015;64(1):45-54. http://doi.org/10.1590/0047-2085000000056

17. Sá EB, Santos YL, Silva TD. Informe MIR - Monitoramento e avaliação, nº 3. Edição Censo Demográfico 2022. Ministério da Igualdade Racial [Internet]. Brasília; 2024. Available from: https://www.gov.br/igualdaderacial/pt-br/composicao/secretaria-de-gestao-do-sistema-nacional-de-promocao-da-igualdade-racial/diretoria-de-avaliacao-monitoramento-e-gestao-da-informacao/informativos/Informe-edicao-censo-demogrfico2022.pdf

18. Souza IB, Goebel ROR. "On the Way to the CAPS": an epidemiological analysis of the racial determination of suicide in the municipality of Vilhena, Rondônia. Rev Saúde Redes. 2025;11(2):1-17. http://doi.org/10.18310/2446-4813.2025v11n2.4837

19. Santos IN, Black TLP, Silva KV, Santos CFBF. Structural racism and its impact on the health of Brazilian Afro-descendant adolescents. Physis. 2024;34:e34025. http://doi.org/10.1590/S0103-7331202434025pt

20. Ministério da Saúde. Boletim temático da biblioteca do Ministério da Saúde 11: Saúde da população negra. Brasília: Ministério da Saúde; 2022. Available from: https://bvsms.saude.gov.br/bvs/boletim_tematico/populacao_negra_novembro_2022.pdf

21. Ministério da Saúde, Universidade de Brasília. Óbitos por suicídio entre adolescentes e jovens negros 2012 a 2016. Brasília: Ministério da Saúde; 2018. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/obitos_suicidio_adolescentes_negros_2012_2016.pdf

22. Oliveira LGF, Magalhães M. Percurso da implantação da Política Nacional de Saúde Integral da População Negra no Brasil. R bras Est Pop. 2022;39:e0214. https://doi.org/10.20947/S0102-3098a0214

23. Davila-Cervantes CA, Luna-Contreras M. Suicide attempts in the adult Mexican population: an analysis of sociodemographic characteristics and associated factors. Rev Bras Epidemiol. 2024;27:e240014. https://doi.org/10.1590/1980-549720240014

24. Alves APS, Ferreira RG, Fernandes FECV, Campos MEAL, Melo RA. Mortality profile due to homicide and suicide in the male population in the hinterland of Pernambuco. Av Enferm. 2021;39(3):320-31. http://doi.org/10.15446/av.enferm.v39n3.86980

25. Marco MH, Sy A. From Suicide to Homicide: A Literature Review of Mortality Owing to "Externai Causes" in Argentina. Rev Cienc Salud. 2020;28(3):1-20. https://doi.org/10.12804/revistas.urosario.edu.co/revsalud/a.9796

26. Cesaro BC, Santos HB, Silva FNM. Masculinities inherent to the Brazilian men's health policy. Rev Panam Salud Publica. 2018;42:e119. http://doi.org/10.26633/RPSP.2018.119