

Male deaths due to aggression in Brazil from 2011 to 2020

Óbitos masculinos por agressão no Brasil de 2011 a 2020

Muertes masculinas por agresión en Brasil de 2011 a 2020

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RESUMO

Objetivo: Descrever o perfil dos óbitos masculinos por homicídio/agressão no Brasil entre os anos de 2011 a 2020. **Método:** Estudo ecológico descritivo, utilizando dados secundários do Sistema de Informações sobre Mortalidade, disponibilizados pelo Departamento de Informática do Sistema Único de Saúde. A população do estudo foi constituída por óbitos em homens com idade ≥ 15 anos causados por agressão. As variáveis (unidade da federação, macrorregião, faixa etária, raça/cor, estado civil, escolaridade e local de ocorrência) foram analisadas pela estatística descrita. **Resultados:** Entre 2011 e 2020 foram registrados no Brasil 474.635 óbitos masculinos por agressão. A região Nordeste teve a maior frequência de óbitos (41,9%), com a Bahia sendo a mais afetada (26,3%). A principal categoria de agressão foi "disparo por arma de fogo" (81,4%). Jovens entre 20 e 29 anos representaram a faixa etária mais atingida (39,1%), assim como solteiros (73,2%), de cor/raça parda (65,2%) e com quatro a sete anos de estudo (35,6%). **Conclusão:** A mortalidade masculina se apresenta como grave problema de saúde, principalmente entre os mais jovens, solteiros, pardos, com baixa escolaridade, que são vitimados em sua maioria por armas de fogo. Estas mortes ocorrem mais na região onde as condições socioeconômicas e escolaridade são mais precárias.

Descritores: Homens; Mortalidade; Homicídio; Agressão.

ABSTRACT

Objective: To describe the profile of male deaths due to homicide/assault in Brazil between 2011 and 2020. **Method:** Descriptive ecological study, using secondary data from the Mortality Information System, made available by the Information Technology Department of the Unified Health System. The study population consisted of deaths in men aged ≥ 15 years caused by aggression. The variables (federation unit, macro-region, age group, race/color, marital status, education and place of occurrence) were analyzed using the statistics described. **Results:** Between 2011 and 2020, 474,635 male deaths due to aggression were recorded in Brazil. The Northeast region had the highest frequency of deaths (41.9%), with Bahia being the most affected (26.3%). The main category of aggression was "firearm shooting" (81.4%). Young people between 20 and 29 years old represented the most affected age group (39.1%), as well as single people (73.2%), of brown color/race (65.2%) and with four to seven years of study (35.6%). **Conclusion:** Male mortality presents itself as a serious health problem, especially among younger, single, mixed race, with low education, who are mostly victims of firearms. These deaths occur more in the region where socioeconomic conditions and education are more precarious.

Descriptors: Men; Mortality; Homicide; Aggression.

RESUMEN

Objetivo: Describir el perfil de las muertes masculinas por homicidio/agresión en Brasil entre 2011 y 2020. **Método:** Estudio ecológico descriptivo, utilizando datos secundarios del Sistema de Información sobre Mortalidad, puestos a disposición por el Departamento de Tecnología de la Información del Sistema Único de Salud. La población de estudio estuvo compuesta por muertes en hombres de ≥ 15 años causadas por agresión. Las variables (unidad federativa, macrorregión, grupo etario, raza/color, estado civil, educación y lugar de ocurrencia) fueron analizadas mediante las estadísticas descritas. **Resultados:** Entre 2011 y 2020, se registraron en Brasil 474.635 muertes masculinas por agresión. La región Nordeste tuvo la mayor frecuencia de muertes (41,9%), siendo Bahía la más afectada (26,3%). La principal categoría de agresión fue el "disparo con arma de fuego" (81,4%). Los jóvenes de 20 a 29 años representaron el grupo etario más afectado (39,1%), así como las personas solteras (73,2%), de color/raza parda (65,2%) y con cuatro a siete años de estudio (35,6%). **Conclusión:** La mortalidad masculina se presenta como un grave problema de salud, especialmente entre los más jóvenes, solteros, mestizos, con bajo nivel educativo, quienes en su mayoría son víctimas de armas de fuego. Estas muertes ocurren más en la región donde las condiciones socioeconómicas y educativas son más precarias.

Descritores: Hombres; Mortalidad; Homicidio; Agresión.

Introduction

The phenomenon of violence follows the entire path taken by society and by the historical and social context, and is configured in different ways depending on the scenario.¹ High levels of violence, including homicides, place a heavy burden on public health services, especially in developing countries where resources are already scarce. Lethal violence results in direct and indirect monetary costs to society and can impede economic growth.²

From a global perspective, Brazil is among the most violent countries in the world, and the second in Latin America.² According to the atlas of violence, in 2019 alone, 41,692 cases of homicides of men were registered, 28,982 of which were by firearm, while homicides of women were around 3,700 cases.³

With regard to homicide mortality, which is higher in men than in women, and in young black adults, cultural and gender issues related to the behavior of men who expose themselves and become more vulnerable to violence, either as perpetrators or victims, stand out.⁴ From a biologist perspective, aggressiveness is related to the male sex, and largely linked to social factors, such as the abusive use of alcohol, illicit drugs, and access to firearms.⁵

Homicide is considered a robust indicator of levels of violence within States and means the killing of one person by another with intent to cause death or serious injury, by any means, excluding death by lawful intervention and war operations. In addition to taking people's lives, it also harms the lives of the victim's family and community, turning them into "secondary victims".⁶ Although homicide occurs more frequently in individuals living on the margins of society and in young adults and people of color, it can affect people of different socioeconomic classes, ethnicities, and ages.⁶

Although men are the main victims of homicides and lethal violence in Brazil, there is a lack of information regarding the profile and circumstances of these deaths. Thus, studies that seek to analyze mortality data to draw a profile of male deaths due to aggression become relevant.⁷

In view of this scenario that has direct impacts on public health, it is necessary to understand how the distribution of such occurrences occurs, in order to cooperate with information to create prevention strategies. Thus, the objective of this study is to describe the profile of male deaths due to homicide/aggression in Brazil between 2011 and 2020.

Method

It refers to a descriptive, ecological time series study. Secondary data obtained through consultations to the SIM (Mortality Information System), made available by the Department of Informatics of the Unified Health System (DATASUS), at the electronic address www.datasus.gov.br, health information (TABNET)/epidemiological and mortality, were used. The data was accessed on December 20, 2022.

The study population consists of deaths in men in Brazil, registered in the Mortality Information System (SIM) in the period from 2011 to 2020. Men aged 15 years and older and some types of aggression (caused by third parties) were included, which were considered more numerically representative (greater than 2000 deaths).

The following types of aggression were selected: hanging/strangulation/suffocation (X91), sharp or penetrating object aggression (X99), aggression in the middle of a blunt object (Y00), assault by means of physical force (Y04), assault by firing a handgun (X93), assault by firing a larger caliber firearm (X94), assault by firing another firearm or NE (X95). These last three aggressions (X93, X94 and X95) were analyzed together as a single variable called assault by firing a firearm.

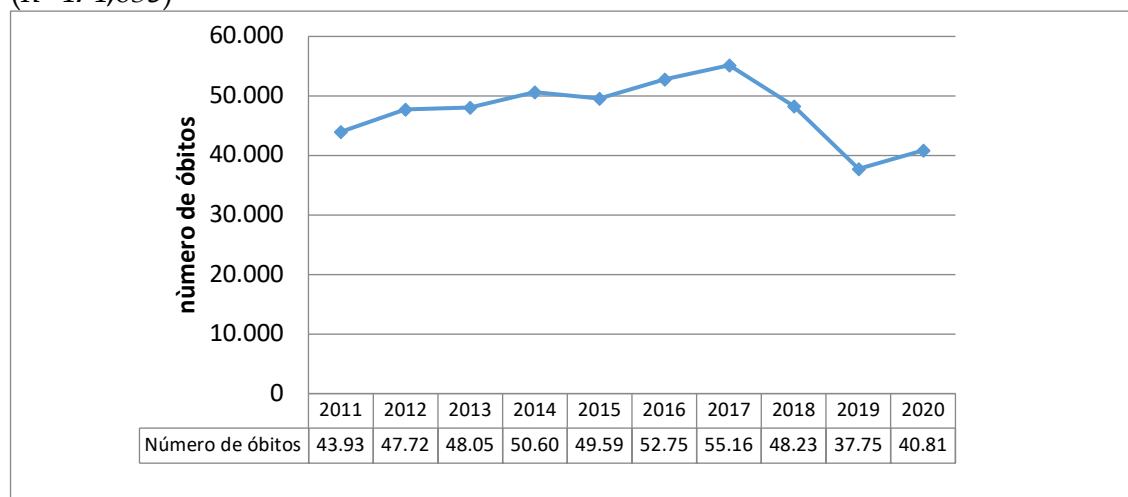
Cases recorded as unknown for gender and age variables, as well as types of aggression by non-specific means, were excluded from the analysis (Y09). The deaths analyzed were related to deaths by occurrence. The variables selected for analysis were those already existing in the system: federation unit and Federal District, macro-regions, age group, marital status, race/color, schooling and place of occurrence. The information related to the variables of interest was analyzed using descriptive statistics

Considering that the study used data in the public domain, it did not present ethical and moral implications, dispensing with the submission and authorization of the research ethics committee.

Results

In the period analyzed, from 2011 to 2020, 474,635 cases of male deaths due to aggression were registered in Brazil. There was an increasing increase from 2011 (43,935) to 2017 (55,163), when the most deaths were recorded, representing an increase of 11.6%. From 2017 to 2019 (37.75; 0.7%) there was a decline, growing again after this period (Figure 1).

Figure 1- Male deaths caused by aggression in Brazil from 2011 to 2020 (n=474,635)



Source: MS/SVS/CGIAE - Mortality Information System - SIM

Table 1 shows the number of male deaths by Federation Units (FU) and by macro-region. It was evidenced that the Northeast region has the highest frequency of deaths (199,336; 41.9%). In this macro-region, Bahia predominates with (52,475; 11.0%), followed by Ceará, with (35,875; 7.5%), and Pernambuco (34,703; 7.3%). The state with the lowest frequency of death is Piauí (5,444; 1.1%). The Southeast stands out as the second largest region with recorded deaths

(119,788; 25.2%), in which São Paulo has the highest frequency (38,204; 8.0%), followed by Rio de Janeiro, with (34,629; 7.2%). The South (52,972; 11.1%) and the Midwest (43,321; 9.1%) are the regions with the lowest numbers of deaths. It is observed that while there was a percentage increase in the number of deaths between the years analyzed in the Northeast (14.2%) and North (6.55%) regions, there was a reduction in the Southeast (23.7%), South (22.1%) and Midwest (13.5%) regions.

Table 01 - Number of male deaths in Brazil by Federation Units and macro-region between 2011 and 2020. Brazil, 2023 (n=474,635)

Region/Federation Unit	2011-2012	2013-2014	2015-2016	2017-2018	2019-2020	Total
North Region	10.063	10.486	12.910	14.671	11.088	59.218
Rondônia	782	853	1088	877	761	4.361
Acre	317	401	521	833	541	2.613
Amazon	2.313	2.089	2520	2812	2621	12.355
Roraima	187	258	307	534	362	1.648
Stop	5467	5.891	6957	8022	5379	31.716
Amapá	411	425	620	655	610	2.721
Tocantins	586	569	897	938	814	3.804
Northeast Region	35420	40.301	42649	45482	35484	199.336
Maranhao	2934	4.090	24353	3681	3350	18.408
Piaui	875	1.146	1207	1105	1111	5.444
Ceara	5962	8.188	7029	9136	5560	35.875
Rio Grande do Norte	1882	2.701	3100	3676	2511	13.870
Paraiba	2766	2.731	2587	2327	1879	12.290
Pernambuco	6069	2.770	7525	8808	6507	34.703
Alagoas	3953	3.906	3300	3035	2106	16.300
Sergipe	1432	1.874	2564	2266	1835	9.971
Bahia	9547	9.871	10984	11448	10625	52.475
Southeast Region	26641	27.464	25143	23634	16906	119.788
Minas Gerais	9338	8.097	7911	6521	4717	34.584
Holy Spirit	2931	1.407	2368	2329	1970	12.371
Rio de Janeiro	6791	7.132	7108	8489	5109	34.629
Sao Paulo	9581	9.462	7756	6295	5110	38.204
South Region	10928	10.770	11997	11093	8184	52.972
Paraná	5854	5.085	5160	4340	3405	23.844
Santa Catarina	1351	1.356	1598	1607	1189	7.101
Rio Grande do Sul	3723	4.329	5239	5146	3590	22.027
Midwest Region	8603	9.637	9653	8520	6908	43.321
Mato Grosso do Sul	1069	1.016	1020	924	772	4.801
Mato Grosso	1723	2.160	2052	1767	1611	9.313
Goiás	4141	4.880	5175	4787	3696	22.679
Federal District	1670	1.581	1406	1042	829	6.528
TOTAL	91655	98.658	102352	103400	78570	474.635

Source: MS/SVS/CGIAE - Mortality Information System - SIM

Table 2 shows the frequency of deaths by ICD-10 category in each state of the federation. The predominant category was "shooting by firearm" (368,425; 77.6%), followed by "sharp or penetrating object" (71,579; 15.0%). Regarding the category of "firearm shooting" and federative units, the state of Bahia stands out with the highest frequency (44,171; 9.3%) and Roraima with the lowest number of deaths (699; 0.1%).

When comparing the number of deaths between these two states, the difference is 43,472 deaths. With regard to the "sharp object" category, the state of Pará stands out (6,570; 1.3%) when compared to the other states. In São Paulo, the categories "blunt object" predominated (4,594; 0.9%), followed by "hanging, strangulation and suffocation" (782; 0.1%). The state of Paraná has the highest frequency of the category "aggression by means of bodily force" (910; 0.1%) (Table 2).

Tabela 02 - Number of male deaths in Brazil by ICD-10 category in each state between 2011 and 2020. Brazil, 2023 (n=474,635).

Type of Agresion CID-10 Category Capitals	Gunshot	Sharp or penetrating object	By means of a blunt object	Enforcing to, strangulation, suffocation	By means of bodily strength
Rondônia	3.057	992	274	83	25
Acré	1.669	719	137	28	60
Amazonas	8.044	3.134	592	300	288
Roraima	699	611	282	34	22
Pará	23.340	6.570	1.078	257	480
Amapá	1.579	945	171	18	8
Tocantins	2.151	1.306	252	43	52
Maranhão	12.857	4.427	789	130	205
Piauí	3.541	1.498	337	48	20
Ceará	30.552	3.992	831	175	325
Rio Grande do Norte	12.078	1.231	403	93	65
Paraíba	10.252	1.238	496	59	245
Pernambuco	28.007	4.334	1.931	174	257
Alagoas	13.911	1.601	654	96	38
Sergipe	8.388	1.229	202	37	115
Bahia	44.171	5.184	2.160	355	605
Minas Gerais	26.332	5.210	2.069	369	604
Espírito santo	10.190	1.228	745	95	113
Rio de Janeiro	31.617	1.702	596	395	319
São Paulo	25.382	6.621	4.594	782	825
Paraná	17.462	3.978	1.226	268	910
Santa Catarina	4.547	1.650	547	197	160
Rio Grande do Sul	17.851	2.922	827	265	162
Mato Grosso do Sul	2.776	1.717	92	114	102
Mato Grosso	6.261	2.256	652	80	64
Goiás	17.037	4.124	936	227	355
Distrito Federal	4.686	1.230	276	66	270
Total	368.425	71.579	23.149	4.788	6.694

Source: MS/SVS/CGIAE - Mortality Information System - SIM.

Table 3 shows the number of male deaths by ICD-10 category by Brazilian macro-regions. Male deaths due to "firearm discharge" have the highest number in all regions, especially in the Northeast region (163,757; 34.5%). In this region, deaths by "aggression with a sharp or penetrating object" (24,734; 5.2%) and by "aggression by means of bodily force" (1,875; 0.3%) also predominate. The Southeast has the highest number of male deaths due to "hanging, strangulation

and suffocation" (16,641; 3.5%) and "aggression by means of a blunt object" (8,004; 1.6%).

Table 03 - Number of male deaths in Brazil by ICD-10 category in Brazilian macro-regions between 2011 and 2020. Brazil, 2023 (n=474,635)

CID-10 Category	North	Northeast	Southeast	South	Midwest	Total
X91 - Assault, Enforc, Strangulation, Choking	763	1.167	1.641	730	487	4.788
93- Assault by firing a firearm	40.527	163.757	93.521	39.860	30.760	368.425
X99 - Sharp or penetrating object aggression	14.207	24.734	14.761	8.550	9.327	71.579
Y00 - Aggression by means of a blunt object	2.786	7.803	8.004	2.600	1.956	23.149
Y04 - Assault by means of bodily force	935	1.875	1.861	1.232	791	6.694
TOTAL	59.218	199.336	119.788	52.972	43.321	474.635

Source: MS/SVS/CGIAE - Mortality Information System - SIM

Table 4 shows the number of male deaths by ICD-10 category according to the following variables: color/race, schooling, marital status, place of death, and age group. Deaths among brown-skinned men (309,667; 65.2%) predominated in all ICD-10 categories, especially "firearm discharge" (243,113; 51,2%). It should be noted that the number of color/race registered as unknown (17,899; 3.7%) should be highlighted. Regarding marital status, the higher number of deaths in single men (347,437; 73.2%) in all categories is noteworthy. Regarding schooling, men who had between four and seven years of schooling were the most affected (169,222; 35.6%). Unknown data regarding mortality according to schooling in men were (105,979; 22.3%).

Table 4 also shows that the ages between 20 and 29 years (185,752; 39.1%), 30 to 39 years (110,585; 23.2%) and 15 to 19 years (80,205; 16.8%), with a higher frequency of deaths in males, especially among all categories of aggression, with firearm discharging being the highest value in the place of occurrence of deaths. The highest frequency on public roads (222,000; 46.7%) was highlighted, followed by hospitals (109,371; 23.0%). Regarding the route of occurrence of death, it is noteworthy that it was on the public highway where practically all categories of deaths due to aggression predominated, except by means of bodily force, which prevailed in the hospital. Regarding the age group, it draws attention.

Table 04 - Number of deaths by ICD-10 category and color/race, marital status, education, place of death and age group, Brazil, 2023 (n=474,635)

Type of Agresion CID-10 Category	Gunshot	Sharp or penetrating object	By means of a blunt object	Enforcing to, strangulation, suffocation	By means of bodily strength	TOTAL
Race/Ethnicity						
White	80.662	17.099	6.615	1.553	2.035	107.964
Black	29.059	5.444	1.811	392	510	37.216
Brown	243.113	46.195	13.878	2.643	3.838	309.667
Yellow	456	116	48	9	9	638
Indigenous	558	515	101	34	43	1.251

Ignored	14.577	2.210	696	157	259	17.899
Marital Status						
Single	276.173	48.838	14.739	3.201	4.486	347.437
Married	36.001	7.647	3.171	562	840	48.221
Widower	1.524	758	403	91	150	2.926
Legally separated	7.336	2.337	1.117	203	372	11.365
Other	20.313	4.957	1.075	215	241	26.801
Ignored	27.078	7.042	2.644	516	605	37.885
Education Level						
No	10.028	4.569	1.563	218	454	16.832
1 to 3 years	62.366	14.004	4.234	755	1.322	82.681
4 to 7 years	136.627	22.338	6.640	1.440	2.177	169.222
8 to 11 years	73.057	12.187	3.729	1.020	1.177	91.170
12 years and older	6.642	1.273	481	221	134	8.751
Ignored	79.705	17.208	6.502	1.134	1.430	105.979
Age Range						
15 to 19 years old	69.965	7.314	1.967	505	454	80.205
20 to 29 months	154.831	22.264	5.792	1.400	1.465	185.752
30 to 39 months	82.657	19.449	5.718	1.133	1.628	110.585
40 to 49 months	36.353	11.601	4.243	688	1.373	54.258
50 to 59	15.950	6.356	2.842	476	942	26.566
60 to 69	6.147	2.940	1.506	295	473	11.361
70 to 79	1.957	1.249	781	191	235	4.413
80 years and over	565	406	300	100	124	1.495
Place of death						
Hospital	81.556	17.247	6.546	192	3.830	109.371
Other Healthcare Facility	8.057	1.452	306	60	188	10.063
Domicile	35.723	11.314	2.928	1.339	509	51.813
Public road	183.347	26.998	8.879	1.391	1.385	222.000
Other	57.955	14.012	4.257	1.770	761	78.755
Ignored	1.787	556	233	36	21	2.633

Source: MS/SVS/CGIAE - Mortality Information System - SIM

Discussion

The results presented provide important information about the current panorama of male deaths due to homicide/aggression in Brazil between 2011 and 2020. The high number of deaths found in this study demonstrates the magnitude of violence in the country as a criminal means of shortening lives.

An ecological study on mortality that analyzed trends and distribution of homicide mortality rates according to population size of Brazilian municipalities between 2000 and 2015, found that mortality due to aggression in men has remained high in the country, with important regional variations, associated with social, cultural, geographic and political aspects.⁸

The increasing increase in the number of deaths between 2011 and 2017 found in this study may be justified by the fact that Brazil has experienced a

context of intensified violence in several regions of the country, associated with economic and political crises.³

A decline in deaths between 2017 and 2019 was also observed in this study. According to the Institute of Applied Economic Research (IPEA), in the 2020 atlas of violence, this drop can be explained by three main factors: the maturation of state public security policies, the disarmament statute by the supposed armistice, especially among the largest criminal factions in the north and northeast, and underreporting, present in cases classified as "violent death with undetermined cause." On the other hand, the instability in the reduction of the number of deaths in the years 2018 and 2019 was due to the growth and strengthening of pro-gun policies and social currents and political instability that reflect on the relationship between militias and factions.³

In this study, it was found that deaths in men due to aggression in the analyzed period presented regional disparities, with the Northeast and Southeast regions standing out as the most violent. A study that analyzed the dynamics of homicidal violence, its socioeconomic and institutional implications, and the causal possibilities between inequality and poverty, also pointed to the Northeast as the most violent region.⁴

Considering the interrelationship between violence and socioeconomic conditions of the population, it can be inferred that the fact that the Northeast has the worst social indicators (low Human Development Indexes - HDI, illiteracy, poverty and income inequality), compared to the other regions of the country, may explain the high numbers of deaths by aggression in men.⁹

An ecological cohort study conducted in the Northeast and Southeast regions emphasized the need to understand the factors that contribute to the high mortality from homicides among men in these regions of Brazil, considering that this can help in the development of more effective prevention and intervention strategies to reduce these rates.¹⁰

The findings of this study show that while in the Northeast and North regions there was a percentage increase in deaths due to aggression among men, on the other hand, there was a decline in the Southeast, South and Midwest regions. These findings are in line with data from the 2021 Atlas of Violence.¹¹

A literature review draws attention to the fact that in the Northeast, homicides affect with a greater predominance the victims of the male sex, low level of education, blacks, young people under 30 years of age and those with low income.⁴ This reinforces the need to develop public policies aimed at reducing social inequalities and promoting greater social justice.⁹

In the case of the Southeast, which concentrates important urban centers such as São Paulo and Rio de Janeiro, the rates of violence are associated with factors such as drug trafficking, territorial disputes between gangs and militias, in addition to the presence of communities marked by social exclusion.¹⁰ According to these authors, income inequality is also a reality in this region. This can aggravate social problems and increase individuals' vulnerability to violence. In Brazil, violent deaths, especially of young people, have been increasing since the 1980s with greater frequency in large urban centers, representing a fatality that has repercussions on demographic dynamics, health, and economic and social development.¹¹

In the present study, regarding the frequency of deaths by ICD-10 category in each state of the federation, the highlight was the firearm discharge modality

in all regions, especially with the highest number in the Northeast region, followed by the Southeast. A study points out that in 2017 in Brazil, there were more than 45 thousand deaths by firearms, more than half of them among men aged 15 to 29 years, and the highest rates were observed in the federation units of Alagoas, Sergipe and Rio Grande do Norte.¹²

A time-trending ecological cohort study conducted from 1980 to 2014 on male homicides in two Brazilian regions highlighted the type of firearm as an important factor influencing the male mortality rate in Brazilian states, and this variable shows a significant association with homicide rates.¹⁰

Global studies indicate that high mortality rates from firearm violence are intrinsically related to the greater availability of firearm deaths.¹³⁻¹⁴ Research on the association between firearms and mortality in Brazil between 1990 and 2017 showed that Brazil leads the world in the number of firearm deaths and that these deaths increased in Brazil from 25,819 in 1990 to 48,493 in 2017.¹² According to these authors, there was a change in the trend of deaths by this modality after the collection of weapons in 2004 and that Federation Units that collected the most had reduced rates for this type of aggression. Other factors associated with death by firearms are the existence of groups linked to drug trafficking, theft of goods, and control of territory.¹²

Death by aggression with a sharp or penetrating object also had a high frequency in the modality. A study that evaluated lethal violence that occurred at home in the state of Pernambuco found that this was the most frequent modality, including men and women.¹⁵ These authors justify the possibility that this means of perpetration is due to the greater ease of access to this type of weapon and the decrease in firearms smuggling in these regions.

Regarding the race/color variable, in the present study, a higher frequency of deaths was observed in brown men. Black people (black and brown) have a higher risk of deaths by homicide than white people regardless of schooling.¹⁶ For the authors, these data coincide with the structure of Brazilian society, in which pre-established racism causes a true genocide of the black and young male population, who often present situations of poverty and marginalization, which are related to deaths due to aggression. It is important to note that the group in question, due to its degree of vulnerability to involvement with criminal acts, may be perpetrators or victims.¹⁰

It is worth noting the high number of deaths in indigenous men found in this study. Although violence against indigenous peoples has always been present in Brazil, since 2000 various forms of expression of violence, such as death threats, bodily injury and rape, have increased.¹¹ The literature indicates that the spatial distribution of homicides of indigenous people is concentrated in the North and Midwest regions, regions in which indigenous tensions and territorial disputes are more common. due to the increase in the illegal invasion of indigenous lands by miners and loggers.¹⁷ Another point to highlight is that similarly to the black Brazilian population, the indigenous population has the worst levels of education and employment, less access to goods and services.¹⁸

Regarding marital status and age group, there was a predominance of deaths due to aggression among single men and young adults. This result may be related to the fact that single and younger people are more likely to be involved in violent events. Preventive and public health actions aimed at

reducing deaths from aggression in young men, especially in urban and peripheral areas, are important.¹⁹

Regarding schooling, the findings of this study indicate higher mortality among men with 4 to 7 years of schooling, which is considered low schooling. The literature has already shown an association between violence and the level of education, i.e., the lower the level of education, the greater the chances of violence and dying from this cause.¹⁶ A study indicates that the chances of death are lower in men with higher levels of education, which is explained by the difference in access to available services, economic inequality and lifestyle.²⁰ The high number of "ignored" schooling found in this study hindered the analysis of this important socioeconomic indicator and its relationship with the number of deaths due to violence.

Regarding the age group, the present study found that the highest frequency of deaths occurred in men aged 20 to 29 years, corroborating data from the 2019 National Health Survey (PNS), which pointed to a higher prevalence of harm suffered by violence in young people aged 18 to 29.²¹

With regard to the place of occurrence, the present study indicated the public road as the most frequent place. The lack of more precise information on the location of the occurrence of deaths resulting from intentional homicides leads us to believe that the predominance on public roads may be due to the fact that some neighborhoods have high levels of socioeconomic precariousness.

The most effective interventions to reduce deaths from assault must address violence as a public health crisis, considering it as a phenomenon resulting from a combination of individual and societal circumstantial factors, including exposure to domestic violence during childhood, high inequality, poor school systems, and lack of employment opportunities, among many others. In this context, primary health care professionals should try to identify risk situations and appropriately refer cases to social support and protection bodies. Nursing can contribute to the construction of a care network aimed at preventing violence and promoting the health of the male population.

The limitations of this study are related to the use of secondary data, and are therefore subject to cases of underreporting and incomplete information, which can directly impact the reliability of the data. Another limitation is the limited number of variables registered in the system.

Conclusion

Deaths in men due to assault in Brazil between 2011 and 2020 is a matter of concern. During this period, there was an oscillation between growth (2011 to 2017) and reduction (2017 to 2019) and growth (2020) of registered deaths. The Northeast region recorded the highest number of deaths, with the states of Bahia, Ceará and Pernambuco standing out in this region. The Southeast macro-region ranked second in terms of death registration, with São Paulo and Rio de Janeiro having the highest frequencies of deaths. The South and Midwest were the regions with the lowest number of deaths.

Deaths due to aggression affect the male population unequally, with differences between race/color, age, education, and geographic region. The main type of aggression that caused death was gunshots. These data reinforce the need

for implementation and programs to prevent violence, especially for the most vulnerable group.

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