






Self-harm violence in adults in Espírito Santo between 2011-2018: Analyses in relation to reported cases

Violência autoprovocada em adultos no Espírito Santo entre 2011-2018: análises em relação aos casos notificados

Violencia autoinflingida de adultos en Espírito Santo entre 2011-2018: análisis en relación a casos informados

Ranielle de Paula Silva¹ 
Samuel Brambilla Roncete¹ 
Talita Lucas de Oliveira Gomes¹ 
Karina Fardin Fiorotti² 
Franciéle Marabotti Costa Leite² 

¹ FAESA – Centro Universitário (FAESA), Vitória, Espírito Santo, Brasil.

² Universidade Federal do Espírito Santo (UFES), Vitória, Espírito Santo, Brasil.

Corresponding author:

Ranielle de Paula Silva

E-mail: raniellesilva@gmail.com

How to cite this article: Silva RP, Roncete SB, Gomes TLO, Fiorotti KF, Leite FMC. Self-harm violence in adults in Espírito Santo between 2011-2018: analyses in relation to reported cases. Rev. Eletr. Enferm. 2023;25:73707. <https://doi.org/10.5216/ree.v25.73707> English, Portuguese.

Received: 11 August 2022
Accepted: 23 March 2023
Published online: 16 June 2023

ABSTRACT

Objective: identify the proportion of self-inflicted violence in adults in relation to reported cases in Espírito Santo in the period 2011-2018 and its association with individual and event characteristics. **Methods:** cross-sectional study, conducted with data from reported cases of violence from the Brazilian Information System for Notifiable Diseases (SINAN) of Espírito Santo, between 2011 and 2018. The population of interest was individuals in the aged between 20 and 59 years. The outcome variable was self-inflicted violence. The individual and event characteristics were the independent variables. Bivariate and multivariate analysis were performed and presented in relation to the crude and adjusted prevalence ratio. **Results:** the proportion of self-inflicted violence reported was 29.6% in the period studied. Considering the number of reported cases of violence, associations of self-inflicted violence were verified with the female gender, age range of 20 to 29 years, higher education, disability or mental disorder, residence as place of occurrence, suspected alcohol use, and no history of previous event occurrence. **Conclusion:** the variables related to the individual and the environment of the occurrence are associated with self-inflicted violence, indicating a specific profile for these cases of violence in relation to the set of notifications.

Descriptors: Violence; Self-Injurious Behavior; Health Information Systems; Epidemiology.

RESUMO

Objetivo: identificar a proporção de violência autoprovocada em adultos em relação aos casos notificados no Espírito Santo no período de 2011-2018 e sua associação com características individuais e do evento. **Métodos:** estudo transversal, realizado com dados dos casos notificados de violência do Sistema de Informação de Agravos de Notificação (SINAN) do Espírito Santo, entre 2011 e 2018. A população de interesse foi de indivíduos na faixa etária de 20 a 59 anos. O desfecho foi violência autoprovocada. Características individuais e do evento foram as variáveis independentes. Realizou-se análise bivariada e multivariada apresentadas em razão de prevalência bruta e ajustada. **Resultados:** a proporção de violência autoprovocada notificada foi de 29,6% no período estudado. Considerando o montante de casos de violência notificados, foram verificadas associações de violência autoprovocada com sexo feminino, ter idade 20 a 29 anos, apresentar maior escolaridade, deficiência ou transtorno mental, residência como local de ocorrência, suspeita de uso de álcool e ausência de história de ocorrência anterior. **Conclusão:** as variáveis relacionadas ao indivíduo e ao ambiente da ocorrência estão associadas a violência autoprovocada, indicando um perfil específico para estes casos de violência em relação ao conjunto das notificações.

© 2023 Universidade Federal de Goiás This is an open access article distributed under the terms of the Creative Commons license.



Descritores: *Violência; Comportamento Autodestrutivo; Sistemas de Informação em Saúde; Epidemiologia.*

RESUMEN

Objetivo: identificar la proporción de violencia autoinflingida de adultos en relación a casos informados en Espírito Santo en período 2011-2018 y su asociación con características individuales y del evento. **Métodos:** estudio transversal, realizado sobre datos de los casos informados de violencia del Sistema de Información de Enfermedades de Notificación Obligatoria (SINAN, acorde sigla en portugués) de Espírito Santo, entre 2011 y 2018. La población de interés corresponde a individuos en faja etaria de 20 a 59 años. El desenlace refiere a violencia autoinflingida. Las características individuales y del evento fueron las variables independientes. Se realizó análisis bivariado y multivariado, expresados en razón de prevalencia bruta y ajustada. **Resultados:** la proporción de violencia autoinflingida informada fue del 29,6% en el periodo estudiado. Considerando la cantidad de casos de violencia notificados, fueron verificadas asociaciones de violencia autoinflingida con sexo femenino, edad de 20 a 29 años, tener mayor escolarización, deficiencia o trastorno mental, domicilio como lugar de ocurrencia, sospecha de abuso de alcohol y ausencia de historial de ocurrencia previa. **Conclusión:** las variables relacionadas al individuo y al ámbito de ocurrencia están asociadas a violencia autoinflingida, indicando un perfil específico para estos casos de violencia en relación al conjunto de notificaciones.

Descritores: *Violencia; Conducta Autodestructiva; Sistemas de Información en Salud; Epidemiología.*

INTRODUCTION

Self-harm violence refers to violence perpetrated against oneself and can be characterized by suicidal thoughts and behaviors, self-mutilations, suicide attempts, and completed suicide⁽¹⁾.

As can be seen, this is a comprehensive range of events. For better understanding, it is appropriate to define two of the phenomena that are included in self-harm violence. One of them is self-mutilation, which consists of violence perpetrated against oneself by cutting, burning, and beating oneself, among other means of aggression, but without the intention of committing suicide⁽¹⁾. The other, attempted suicide, is defined as violence perpetrated against oneself with the aim of taking one's own life, but without actually accomplishing it⁽¹⁾. Self-harm violence can then be understood from the perspective of morbidity and mortality.

Global estimates by the Global Burden Disease⁽²⁾ for 2019 show that, in people aged 15 to 49 years, self-harm violence was the fourth leading cause of death, with an estimated global rate of 11.1 deaths per 100,000 inhabitants. In Brazil, the same study estimated self-harm as the seventh leading cause of death in this age group, with a rate of 7.5 deaths per 100,000.

The World Health Organization estimates that for each adult who died from suicide, there may have been more than 20 other individuals attempting it⁽³⁾. Data from the Brazilian Mortality Information System (SIM, as per its acronym in Portuguese) indicate that from 2010 to 2019, there were 112,230 deaths by suicide, with a 43.0% increase in the annual number of deaths in the period, which went from 9,454 in 2010, to 13,523 in 2019⁽⁴⁾.

Different aspects of life can influence an individual's desire to commit self-harm, these factors being individual, social, economic and/or environmental⁽³⁾. In

this context, the presence of mental disorders is among the individual factors associated with the occurrence of self-harm^(5,6). Moreover, studies conducted in some locations in southern Brazil on reported cases of self-inflicted violence show a higher occurrence in females, white people, and those who are married or in a stable union^(6,7).

The Brazilian governmental has been working toward a joint action between violence surveillance efforts and comprehensive health care policies. Thus, in 2014, MS/GM Ordinance No. 1,271 of June 6, 2014 was published, which established the immediate (within 24 hours) notification of suicide attempts in the municipal context, with the purpose of ensuring timely intervention in these cases⁽⁸⁾.

Compulsory notification is essential for the strategy of networked care. Through this information, it is possible to properly approach the cases and offer care to people in situations of self-harm violence⁽⁹⁾. Despite its importance, the completion of notifications in health services is still a challenge, since there is some difficulty for health professionals to identify and recognize suspected and confirmed cases of violence⁽¹⁰⁾.

Health professionals have an extremely important role in dealing with people in situations of self-harm violence. It is worth highlighting embracement as an essential strategy of humanized care and without any prejudice or judgment, thus identifying their needs^(1,5).

Research on notifications of self-harm violence provides important information on the epidemiological scenery, such as the study with data from the 2014 Viva survey (in Portuguese *Viva Inquérito*) on all life cycles, which indicated that adults had the highest proportion of notifications (74.6%)⁽¹¹⁾.

Considering that the notification of self-harm violence is mandatory for all health professionals^(8,9) and

that this phenomenon may present different characteristics in different geographic areas, the study of local realities may contribute to better understand it. It was verified that statewide surveys were conducted only in Santa Catarina⁽⁶⁾ and Rio Grande do Sul⁽⁷⁾ which indicates the absence of analyses in other states and regions of Brazil, generating knowledge gaps that may compromise the assertiveness of regional public policies. In addition, this public health issue may not be properly addressed at the various levels of professional training and the planning of care actions may be limited.

This is a relevant topic, included in the Agenda of Research Priorities of the Brazilian Ministry of Health, whose results can bring important contribution to the services and surveillance of states and municipalities⁽¹²⁾. Moreover, for the years 2021-2030, the Ministry of Health prepared the Strategic Action Plan for Confronting Chronic Diseases and Noncommunicable Diseases, which aims, through the production of information, to direct actions to prevent risk factors and promote the health of the population in order to reduce health inequalities. One of the goals proposed by the plan is to stop the growth of mortality by suicide⁽¹³⁾.

In this context, this study was conducted with the purpose of contributing to better understand the occurrence of self-harm violence and its associated factors, based on the reported cases, in order to obtain greater subsidies for the development of prevention strategies.

Given the above, this study aimed to identify the proportion of self-harm violence in adults in relation to the cases reported in Espírito Santo, Brazil, in the period from 2011 to 2018 and its association with individual and event characteristics.

METHODS

This is an epidemiological, cross-sectional study, of secondary data analysis, more specifically, of the notifications of violence from the Brazilian Information System for Notifiable Diseases (SINAN, as per its acronym in Portuguese). This system captures data on interpersonal and self-harm violence notified in health services.

The study population consisted of adults aged 20 to 59 years, who were assisted in healthcare services of Espírito Santo, Brazil, and who had an event of self-harm violence reported in SINAN, in the period from 2011 to 2018. This period was chosen considering that, in 2011, the mandatory notification of cases of violence by healthcare services was enacted, according to Ordinance No. 104⁽⁸⁾. The notifications were made in this system until 2018, and, as of 2019, the state migrated the notification data to the e-SUS VS platform.

Espírito Santo is a state located in the southeast region of Brazil, with a land area of 46,074.444 km², a demographic density of 76.25 inhabitants/km², and a Human Development Index (HDI) of 0.740. According to the last demographic census, conducted in 2010 by the Brazilian Institute of Geography and Statistics (IBGE), it had about 3.5 million inhabitants, and the adult population (20 to 59 years) was estimated at 1,677,216 people, corresponding to 47.1% of the population⁽¹⁴⁾.

The data were collected from the individual notification form of interpersonal/self-harm violence. Once the project was approved by the research ethics committee and State Health Secretariat of Espírito Santo, the database was provided by the State Department of Health through the Epidemiological Surveillance office.

Exploratory descriptive analysis was carried out to qualify the variables of interest and to correct inconsistencies in the database, following the guidelines of the Interpersonal and Self-Inflicted Notification Instruction. Duplicate cases were verified and removed.

The dependent variable was self-harm violence, defined according to the following criteria of the instructions for completing the notification form for interpersonal and self-harm violence: "cases in which the assisted person/victim provoked aggression against himself/herself or attempted suicide. An attempted suicide is defined as the act of trying to end one's own life, however, without completing the attempt"⁽⁸⁾.

The independent variables were: sex (male/female); age (20-29 years/30-39 years/ 40-49 years/50-59 years) or age limit; race/color (white/black/brown); education (0-4 years/5-8 years/9 years or more); disability/mental disorder (no/yes); area of residence (urban/peri-urban/rural); place of occurrence (residence/public road/other), previous occurrences (no/yes); and suspected alcohol consumption (no/yes).

Descriptive data on the variable for means of aggression were also presented (sharp object/poisoning/hanging/other).

Descriptive analysis was performed using relative and absolute frequencies and 95% confidence intervals. For the bivariate analysis, Pearson's chi-square test was used to test the relationship between the independent variables and the outcome variable. Poisson Regression (PR) was used for the multiple model analysis. The variables that obtained a p value equal to or less than 0.2 in the bivariate analysis were included in the model; their maintenance in the model followed the criterion of $p < 0.05$, and the results were expressed in raw and adjusted prevalence ratios (PR) with their respective 95% confidence intervals (95% CI). The means of aggression variable did not enter the model because in the

modeling it was acting as a confounding variable, due to its almost total association with the response variable, since 96.7% of the cases of self-harm violence in adults had poisoning as the means of aggression. The analyses were performed using the STATA 13.0 program (Stata Corporation, Texas, United States of America).

The study was approved by the Research Ethics Committee of the Federal University of Espírito Santo (CAAE: 88138618.0.0000.5060, opinion number 2.819.597). All guidelines of Resolution 466/2012 were respected. Since this is a study with secondary data, the use of an informed consent form was not required.

RESULTS

In the period from 2011 to 2018, in the adult population, a total of 21,399 cases of violence were reported, of which 6,341 were self-harm, corresponding to a proportion of 29.6% (95% CI: 29.0 - 30.2; data not shown in the table).

According to the data presented in Table 1, regarding the characteristics of adults who reported self-harm violence, it is observed that most are women (74.4%), aged 20 to 29 years (37.1%), of black and mixed race/color (61.9%) and who had a partner (53.6%). As for their level of education, the majority had 9 or more years of schooling (61.0%) and no disability or mental disorder (62.9%). The urban/peri-urban area was the place of residence of these people in 90.1% of the cases, and the place of occurrence of the self-harm violence was their residence in 88.7%. In 75.5% of the cases, alcohol use was not suspected, and in about 54.0% of the cases, the self-induced violence had already occurred on other occasions (Table 1).

Considering the total number of cases of violence reported in the period, in terms of the bivariate analysis, and comparing the adult population that reported self-harm violence and those who suffered interpersonal violence, the variables sex, age group, race/skin color, education level, marital status, disability/disorder, suspected alcohol use, place of occurrence, and repeated violence were related to the outcome under study ($p < 0.05$).

After an adjusted multivariate analysis, the variables that were associated with self-harm violence in adults are presented in Table 3, considering the context of the total number of cases of violence reported. The prevalence of this specific offense was 1.45 times (95% CI: 1.34 - 1.60), or 28% (PR: 1.28; 95% CI: 1.12 - 1.45), higher in the age group between 20 and 29 years, when compared to those aged 50 to 59 years.

The prevalence of reporting self-harm violence was 1.13 times (95% CI: 1.06 - 1.25) higher among white

Table 1 - Characterization of reported cases of self-harm violence in adults, Espírito Santo, Brazil, 2011 - 2018 (n = 6,341)

Variables	n	%	95% CI ¹
Sex			
Male	1624	25.6	16.3 - 39.6
Female	4717	74.4	60.4 - 83.7
Age range (years)			
20 to 29	2358	37.1	35.9 - 38.3
30 to 39	2084	32.9	31.8 - 34.1
40 to 49	1347	21.3	20.3 - 22.4
50 to 59	552	8.7	8.0 - 9.4
Race/Skin color			
White	1997	38.1	36.4 - 39.0
Black/Brown	3250	61.9	60.1 - 62.7
Education level (years)			
0 to 4	519	13.8	12.5 - 14.7
5 to 8	949	25.2	23.8 - 26.6
9 or more	2296	61.0	59.7 - 62.8
Marital status			
Without a partner	2558	46.4	38.7 - 41.5
With a partner	2266	53.6	44.9 - 47.8
Disability/Disorder			
Yes	1774	37.4	36.7 - 39.5
No	2967	62.6	60.5 - 63.3
Area of residence			
Urban/Peri-urban	5584	90.1	89.6 - 91.1
Rural	614	9.9	8.9 - 10.4
Place of occurrence			
Residence	5025	88.7	88.3 - 89.9
Public road	343	6.1	5.8 - 7.1
Other	293	5.2	3.9 - 5.0
Suspected alcohol consumption			
No	3113	75.5	74.8 - 77.4
Yes	1009	24.5	22.5 - 25.2
Previous occurrences			
No	2158	45.8	52.7 - 55.6
Yes	2553	54.2	44.4 - 47.3

Note: ¹ 95% confidence interval.

than black and brown individuals, 1.16 times (95% CI: 1.07 - 1.25) among those with 9 or more years of education when compared to those with 5 to 8 years, and about three times higher (PR: 2.97; 95% CI: 2.78 - 3.17) among those with disabilities or mental disorders. We found that self-harm violence among adults was about 3.5 times more often committed at home and

Table 2 - Proportion of reported cases of self-harm violence in adults (n = 6,341) according to individual and occurrence characteristics, in relation to the total number of reported cases of violence (N = 21,399), Espírito Santo, Brazil, 2011 - 2018

Variables	n	%*	95% CI**	p-value
Sex				
Male	1624	41.1	39.6 – 42.6	<0.001
Female	4717	27.0	26.4 – 27.7	
Age range (years)				
20 to 29	2358	30.9	29.9 – 31.9	<0.001
30 to 39	2084	28.6	27.5 – 29.6	
40 to 49	1347	30.6	29.3 – 32.0	
50 to 59	552	26.7	24.9 – 28.7	
Race/Skin color				
White	1997	33.3	32.1 – 34.5	<0.001
Black/Brown	3250	25.5	24.8 – 26.3	
Education level (years)				
0 to 4	519	24.3	22.5 – 26.2	<0.001
5 to 8	949	22.4	21.2 – 23.7	
9 or more	2296	29.5	28.5 – 30.6	
Marital status				
Without a partner	2558	26.8	25.9 – 27.6	0.024
With a partner	2216	25.3	24.4 – 26.2	
Disability/Disorder				
Yes	2967	19.8	19.2 – 20.5	<0.001
No	1774	58.6	56.8 – 60.3	
Area of residence				
Urban/Peri-urban	5584	29.7	29.0 – 30.3	0.772
Rural	614	30.0	28.0 – 32.0	
Place of occurrence				
Residence	5,025	35.6	34.8 – 36.3	<0.001
Public road	343	10.7	9.6 – 11.8	
Other	293	16.0	14.4 – 17.7	
Means of aggression				
Sharp object	548	28.1	26.2 – 30.2	<0.001
Poisoning	4311	96.3	95.7 – 96.8	
Hanging	265	78.6	73.9 – 82.7	
Other	1067	7.6	7.2 – 8.1	
Suspected alcohol consumption				
No	3113	38.4	37.3 – 16.0	<0.001
Yes	1009	15.2	14.3 – 16.0	
Previous occurrences				
No	2158	26.2	25.3 – 27.1	<0.001
Yes	2553	29.0	27.9 – 30.0	

Note: * Calculated in relation to the total number of cases of violence reported in the period; ** 95% confidence interval.

twice as often among individuals without suspected alcohol use. It is worth noting that the notifications were

1.5 times higher among those who had not experienced previous occurrences of such violence.

Table 3 - Gross and adjusted analysis of the effects of the characteristics of self-harm violence cases among adults, in relation to other cases of violence reported, Espírito Santo, Brazil, 2011 - 2018

Variables	Gross analysis			Adjusted analysis		
	PR*	95% CI**	p-value	PR*	95% CI**	p-value
Sex						
Male	1.0	--	<0.001	1.0	--	<0.001
Female	1.52	1.45 - 1.59		1.45	1.34 - 1.60	
Age range (years)						
20 to 29	1.15	1.07 - 1.25		1.28	1.12 - 1.45	
30 to 39	1.07	0.99 - 1.16	<0.001	1.13	0.99 - 1.28	<0.001
40 to 49	1.15	1.05 - 1.24		1.24	1.08 - 1.41	
50 to 59	1.0	--		1.0	--	
Race/Skin color						
White	1.30	1.25 - 1.37	<0.001	1.13	1.06 - 1.25	<0.001
Black/Brown	1.0	--		1.0	--	
Education level (years)						
0 to 4	1.08	0.98 - 1.19		0.95	0.84 - 1.06	
5 to 8	1.0	--	<0.001	1.0	--	<0.001
9 or more	1.31	1.23 - 1.40		1.16	1.07 - 1.25	
Disability/Disorder						
Yes	1.0	--	<0.001	1.0	--	<0.001
No	2.95	2.83 - 3.09		2.97	2.78 - 3.17	
Marital status						
Without a partner	1.06	1.01 - 1.11	0.024	0.96	0.91 - 1.05	0.652
With a partner	1.0	--		1.0	--	
Place of occurrence						
Residence	3.33	3.00 - 3.69		3.56	2.99 - 4.24	<0.001
Public road	1.0	--	0.000	1.0	--	
Other	1.49	1.29 - 1.73		1.71	1.37 - 2.13	
Suspected alcohol consumption						
No	2.52	2.37 - 2.69	0.000	2.18	1.99 - 2.38	<0.001
Yes	1.0	1.13 - 1.15		1.0	--	
Previous occurrences						
No	1.10	1.05 - 1.16	0.000	1.50	1.40 - 1.61	<0.001
Yes	1.0	--		1.0	--	

Note: * PR: Prevalence Ratio; ** 95% CI: 95% confidence interval.

DISCUSSION

The present study evidenced the proportion of 29.6% (95% CI: 29.0 - 30.2) of notifications of self-harm violence in adults in Espírito Santo between 2011 and 2018 in relation to reported cases of violence, which represents a considerable amount, requiring very specific professional action, since self-harm injuries indicate the need for immediate relief of some latent mental suffering⁽¹⁾. Self-injury is a determining factor in the development of suicidal behavior in the future, since it

has repercussions on the desire and ability to commit suicide^(3,4). The adult life phase is marked by important and decisive events in the different aspects of an individual's life, and social, economic, family, environmental, and cultural factors are part of the causal complex that interacts with suicidal behavior^(3,15). In this study, data from the Brazilian information system were used, and it was possible to evaluate the variables available in the individual notification form; however, it is important to highlight the need to understand other factors such as

mental disorders, psychological trauma, history of previous violence, unemployment, isolation and low social support, visual and noise pollution, among others, in the occurrence of self-harm violence, especially among adults⁽¹⁶⁾.

In addition, it is worth noting that self-harm and unexpected deaths by suicide have negative repercussions on the lives of individuals and collectivities, since they result in economic, social and psychological burdens for individuals, families, communities and countries⁽³⁾.

With regard to gender, in this study, self-harm violence was 45.0% more frequent in women compared to men. A cross-sectional study in the United States also showed a higher probability of this problem in women than in men⁽¹⁷⁾. In Brazil, research on notifications of self-harm violence in Santa Catarina from 2014 to 2018 showed this behavior in 68.1% of women while among men it was 31.9% prevalent⁽⁵⁾. In Southern Brazil, there was also a higher frequency of self-harm violence notifications in women (67,9%)⁽⁶⁾.

Self-harm injuries and suicide attempts are more frequent among women, since they tend to use less lethal means, while death by suicide prevails among men, because they use more lethal methods^(18,19). Besides the means of aggression, other aspects are pointed out for the difference between men and women, such as previous history of domestic violence, reports of more frequent mental disorders in women, and the search for health care, especially mental health services^(3,17). It is known that men take less care of their own health and seek health services less frequently, which may interfere in the identification of cases⁽²⁰⁾.

Although it is evident that women are more likely to attempt suicide than men, a study with data from the Mortality Information System showed that both sexes showed an increase in suicide rates⁽²¹⁾.

It is also worth mentioning gender as an important marker in the context of violence. It is known that women experience sexual violence and domestic violence more often, and these factors are related to suicidal ideation and suicide attempts⁽²²⁾.

As for the age range, a higher occurrence of self-harm violence was observed among young adults aged 20 to 29 years, corroborating the findings of another study⁽⁶⁾. In a survey conducted in the state of Rio Grande do Sul in the period from 2011 to 2019 with the adult population, the notification of self-harm violence was more frequent in young individuals (20 to 29 years)⁽⁶⁾. A time-series study with data from Brazil showed an increasing trend of one of the constituents of the self-harm injury variable, i.e., suicide, in young adults in the Nor-

theast, North and Southeast regions⁽²¹⁾. This is a period of life in which important transitions occur, thus, they are more likely to experience decisive situations about personal and professional aspects, besides a higher risk of developing risky behaviors such as substance use⁽¹⁵⁾, which possibly leads to more suffering and occurrence of self-harm violence.

In the present study, a higher prevalence of reported cases of self-harm violence was observed in whites, a finding similar to that found in Santa Catarina⁽⁶⁾ between 2014-2018, in Rio Grande do Sul⁽⁷⁾ between 2010-2019, and in Brazil⁽¹⁸⁾ in the period 2009-2014. With regard to suicide attempts and suicide, important variations in percentages of blank data (data not reported in the notifications) are found in different regions of Brazil⁽¹⁸⁾ over the years, and therefore, the interpretation of data on self-harm violence related to race/skin color should be made with caution, especially in Brazil, where black and brown individuals have the worst indicators of health, income, and education^(14,23). The fact that the population of this study is made up of reported cases of violence may suggest inequalities in access to health services.

Although the literature shows that individuals with less education are more exposed to situations of vulnerability involving social inequality and lack of access to health, and which can thus negatively impact health and cause psychological distress⁽²⁴⁾, when compared with interpersonal violence, the cases of notification of self-harm violence reach a higher proportion of individuals with higher education, which was also found in another study with a national scope⁽¹¹⁾.

In the present study, there was a higher frequency of notification of the problem among individuals with disabilities or disorders, a finding that is in line with the literature^(5,6,25). The association between mental and behavioral disorders and suicide attempts is widely discussed in the literature, showing that disorders such as depression, anxiety, bipolar disorder, and personality disorder are responsible for a large proportion of suicides and suicide attempts^(5,6,25).

Home was the main place of occurrence of self-harm violence. Sometimes the suicide attempt is seen as the main alternative by people who do not have enough problem-solving skills, an example of which are individuals who exclude themselves from the family and social context. A healthy family relationship is important in facing this problem. In a study with young adults that sought to analyze the risk and protection factors for suicide attempts, it was observed that the quality of the family relationship had a difference between the groups

that had already attempted suicide and still face or do not face ideation⁽²⁵⁾.

Despite being frequently mentioned in cases of self-harm violence⁽⁵⁾ and more specifically, suicide attempts^(11,26), in the present study no association was found between the suspected use of alcohol and self-harm violence, considering all reported cases of violence, suggesting that it is not a differential element of the profile of people involved in the phenomenon of violence, whether interpersonal or self-harm.

Considering the set of reported cases of violence, an association was observed in this research between notifications of self-harm violence with the absence of a previous occurrence. This does not mean that cases of recurrence should not be valued, since a study conducted in Santa Catarina indicated that approximately 50.6% of cases of self-harm violence had occurred before⁽⁶⁾. This fact requires attention, since it is established in the literature^(3,6,27) that the previous history of self-mutilations and suicide attempts is a risk factor for suicide.

An important limitation to be considered in this study is that the reference population was made up of notifications of violence, and cases of self-harm violence were compared those of interpersonal violence, i.e., the comparison was not made with the group without occurrence of violence. Another limitation consists in a possible selection bias, since the cases that reach the health services and are notified being are mainly the most severe cases, thus excluding the milder cases that occur in the community in general, i.e., the data are representative only of individuals who have the opportunity of access and screening. Another limitation is the study cross-sectional design, which leads to reverse causality, i.e., we cannot affirm that the associations found present a causal association considering the temporal limit of data.

Despite these limitations, the results presented in this study can support the planning of health surveillance actions by managers and help establish priorities in guiding health care strategies seeking to promote and protect health and prevent diseases in the adult population.

As a complex phenomenon, the approach to self-harm violence is not simple, since its repercussions are a serious public health problem, with the potential to generate damage and lead to death. Therefore, its confrontation requires intersectoral efforts from society in order to address the different factors that are related to its prevention.

Finally, it is noteworthy the importance of training professionals on how to perform compulsory notification, since incompleteness in filling out the forms

was observed. It is necessary to raise awareness among managers and professionals about the function of the notification form as a tool to strengthen the care and management of this issue.

It is recommended that further studies be conducted to analyze the determining and conditioning factors of the occurrence of self-harm violence in the adult population, since society is dynamic and these factors can change over time and in geographical contexts.

CONCLUSION

The occurrence of notifications of self-harm violence among adults in the state of Espírito Santo in the period from 2011 to 2018, in relation to all cases of violence, represents 29.6%, revealing an event of considerable magnitude. The results reveal distinct characteristics among individuals who carried out acts of self-harm violence compared to those who suffered interpersonal violence: female gender, age between 20 and 29 years, education of 9 years or more, presence of a disability/mental disorder, and absence of previous events.

FUNDING

This research was financially supported by the Espírito Santo Research Support Foundation (FAPES). Fapes/CNPq/Decit-SCTIE-MS/Sesa. Call No. 3/2018-PPSUS

CONFLICTS OF INTEREST

None.

AUTHORS CONTRIBUTIONS – CRediT

RPS: data selection; formal data analysis; methodology; project management; writing - original draft and writing - review and editing.

SBR: data selection; writing - original draft and writing - review and editing.

TLOG: data selection; writing - original draft and writing - revision and editing

KFF: methodology; writing - original draft and writing - review and editing.

FMCL: design; fundraising; methodology; writing - original draft and writing - review and editing.

REFERENCES

1. Krug EG, Dahlberg LL, Mercy JA, Zwi AB, Lozano R, organizadores. World report on violence and health. Geneva: World Health Organization; 2002.

2. Institute for Health Metrics and Evaluation. GBD Results Tool | GHDx. Global Health Data Exchange [Internet]. 2019 [cited 2022 Aug 25]. Available from: <https://www.thelancet.com/lancet/visualisations/gbd-compare>
3. World Health Organization (WHO). Preventing suicide: a global imperative [Internet]. Geneva: World Health Organization; 2014 Aug 17 [cited 2022 Aug 25]. Available from: <https://www.who.int/publications/item/9789241564779>
4. Ministério da Saúde. Secretaria de Vigilância em Saúde. Mortalidade por suicídio e notificações de lesões autoprovocadas no Brasil [Internet]. Brasília (BR): Ministério da Saúde; 2021 Sept [cited 2022 Aug 25]. Available from: https://www.gov.br/saude/pt-br/centrais-de-conteudo/publicacoes/boletins/epidemiologicos/edicoes/2021/boletim_epidemiologico_svs_33_final.pdf
5. Ministério da Saúde. Impacto da violência na saúde dos brasileiros [Internet]. 1 ed. Brasília: Ministério da Saúde; 2005 [cited 2022 Aug 25]. Available from: https://bvms.saude.gov.br/bvs/publicacoes/impacto_violencia.pdf
6. Pinheiro TP, Warmling D, Coelho EBS. Caracterização das tentativas de suicídio e automutilações por adolescentes e adultos notificados em Santa Catarina, 2014-2018. *Epidemiol. Serv. Saúde*. 2021 Dec 03;30(4):e2021337. <https://doi.org/10.1590/S1679-49742021000400026>
7. Fattah N, Lima MS. Perfil epidemiológico das notificações de violência autoprovocada de 2010 a 2019 em um estado do sul do Brasil. *SMAD, Rev Eletrônica Saúde Mental Álcool Drog*. 2020 Aug 31;16(4):65-74. <https://doi.org/10.11606/issn.1806-6976.smad.2020.166310>
8. Ministério da Saúde. Secretaria de Vigilância em Saúde. Viva: instrutivo notificação de violência interpessoal e autoprovocada [Internet]. 2nd ed. Brasília: Ministério da Saúde; 2016 [cited 2022 Aug 25]. Available from: https://bvms.saude.gov.br/bvs/publicacoes/viva_instrutivo_violencia_interpessoal_autoprovocada_2ed.pdf
9. Ministério da Saúde. Secretaria de Vigilância em Saúde. Departamento de Vigilância de Doenças e Agravos não Transmissíveis e Promoção da Saúde. Notificação de violências interpessoais e autoprovocadas [Internet]. 1st ed. Brasília: Ministério da Saúde; 2017 [cited 2022 Aug 25]. Available from: https://bvms.saude.gov.br/bvs/publicacoes/notificacao_violencias_interpessoais_autoprovocadas.pdf
10. Thomazine AM, Oliveira BRG, Vieira CS. Atenção a crianças e adolescentes vítimas de violência intrafamiliar por enfermeiros em serviços de pronto-atendimento. *Rev. Eletr. Enferm*. 2009 Dec 31;11(4):830-40. <https://doi.org/10.5216/ree.v11i4.33237>
11. Bahia CA, Avanci JQ, Pinto LW, Minayo MCS. Lesão autoprovocada em todos os ciclos da vida: perfil das vítimas em serviços de urgência e emergência de capitais do Brasil. *Ciênc saúde colet*. 2017 Sept;22(9):2841-50. <https://doi.org/10.1590/1413-81232017229.12242017>
12. Instituto Brasileiro de Geografia e Estatística. Censo demográfico 2010: características da população e dos domicílios [Internet]. Rio de Janeiro (BR): Instituto Brasileiro de Geografia e Estatística; 2010 [cited 2022 Aug 25]. Available from: https://biblioteca.ibge.gov.br/visualizacao/periodicos/93/cd_2010_caracteristicas_populacao_domicilios.pdf
13. Ribeiro JM, Moreira MR. Uma abordagem sobre o suicídio de adolescentes e jovens no Brasil. *Ciênc saúde colet*. 2018 Sept;23(9):2821-34. <https://doi.org/10.1590/1413-81232018239.17192018>
14. Marcolan JF. For a public policy of surveillance of suicidal behavior. *Rev. Bras. Enferm*. 2018;71(suppl 5):2343-7. <https://doi.org/10.1590/0034-7167-2018-0256>
15. Bommersbach TJ, Rosenheck RA, Petrakis IL, Rhee TG. Why are women more likely to attempt suicide than men? Analysis of lifetime suicide attempts among US adults in a nationally representative sample. *Journal of Affective Disorders*. 2022 Aug 15;311:157-64. <https://doi.org/10.1016/j.jad.2022.05.096>
16. Ministério da Saúde. Secretaria de Vigilância Sanitária. Departamento de Análise da Situação em Saúde. Saúde Brasil 2014: uma análise da situação de saúde e das causas externas [Internet]. Brasília (BR): Ministério da Saúde; 2015 [cited 2022 Aug 25]. Available from: https://bvms.saude.gov.br/bvs/publicacoes/saude_brasil_2014_analise_situacao.pdf
17. Brixner B, Koch CL, Marth MP, Freitas AP, Garske CCD, Giehl VM, et al. Formas utilizadas para tentativa de suicídio e características sociodemográficas dos pacientes atendidos no serviço de emergência de um hospital de ensino. *Sci Med*. 2016 Nov 24;26(4):ID24467. <https://doi.org/10.15448/1980-6108.2016.4.24467>
18. Soares RJO, Nascimento FPB. Suicídio e Tentativa de Suicídio: Contribuições da Enfermagem Brasileira. *J Health Sci* [Internet]. 2017 May 22 [cited 2023 Jun 13];1(19):19-24. Available from: <https://journalhealthscience.pgskroton.com.br/article/view/4030>
19. Arruda VL, Freitas BHB, Marcon SR, Fernandes FY, Lima NVP, Bortolini J. Suicídio em adultos jovens brasileiros: série temporal de 1997 a 2019. *Ciênc saúde colet*. 2021 July;26(7):2699-708. <https://doi.org/10.1590/1413-81232021267.08502021>
20. Fonseca-Machado MO, Alves LC, Haas VJ, Monteiro JCS, Gomez-Sponholz F. Sob a sombra da maternidade: gravidez, ideação suicida e violência por parceiro íntimo. *Rev Panam Salud Publica* [Internet]. 2015 [cited 2022 Aug 25];37(4/5):258-64. Available from: <https://iris.paho.org/handle/10665.2/8376>
21. Weber I, Gianolla C, Sotero L. Suicídio e violência estrutural. Revisão sistemática de uma correlação marcada

- pelo colonialismo. *Soc. estado* [Internet]. 2020 Jan-Apr;35(1):189-228. <https://doi.org/10.1590/s0102-6992-202035010009>
22. Machado DB, Santos DN. Suicídio no Brasil, de 2000 a 2012. *J. bras. psiquiatr.* [Internet]. 2015 Jan-Mar;64(1):45-54. <https://doi.org/10.1590/0047-2085000000056>
23. Biezus AJ, Salla L, Wendt GW, Vicentini G, Brizola FM, Yamada R, et al. Epidemiological profile of suicide attempts in a municipality in southwest Paraná, from 2017 to 2020. *Rev. Assoc. Med. Bras.* 2022 Apr;68(4):519-23. <https://doi.org/10.1590/1806-9282.20211242>
24. Pereira AS, Willhelm AR, Koller SH, Almeida RMM. Fatores de risco e proteção para tentativa de suicídio na adultez emergente. *Ciêns saúde colet.* 2018;23(11):3767-77. <https://doi.org/10.1590/1413-812320182311.29112016>
25. Borges G, Bagge C, Cherpitel CJ, Conner K, Orozco R, Rossow I. A meta-analysis of acute use of alcohol and the risk of suicide attempt. *Psychol Med.* 2017 Apr;47(5):949-57. <https://doi.org/10.1017/S0033291716002841>
26. Sinyor M, Tse R, Pirkis J. Global trends in suicide epidemiology. *Curr Opin Psychiatry.* 2017;30(1):1-6. <https://doi.org/10.1097/ycp.000000000000296>
27. Cully G, Corcoran P, Leahy D, Griffin D, Dillon C, Cassidy E, et al. Method of self-harm and risk of self-harm repetition: findings from a national self-harm registry. *Journal of Affective Disorders.* 2019 Mar;246:843-50. <https://doi.org/10.1016/j.jad.2018.10.372>