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MORTALITY FROM EXTERNAL CAUSES: DISCUSSION AND REORIENTATION OF PUBLIC POLICIES IN THE SOUTHERN SCENARIO OF ESPÍRITO SANTO

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ABSTRACT

The emergence of external causes in Brazil, caused by factors inherent to social relations, has driven the health system to create strategies and actions aimed at resolving the tragic scenario experienced by health problems and mortality of victims. That said, the research aimed to verify mortality from external causes in the state of Espírito Santo (ES) and in the southern region of Espírito Santo. An exploratory, descriptive and quantitative study was developed, consisting of a survey of DATASUS data regarding mortality from external causes in the state of Espírito Santo and in the southern region of Espírito Santo. Between the years 2001 and 2019, the following vital statistics were collected, selecting mortality - 1996 to 2019, by the International Statistical Classification of Diseases and Related Health Problems (ICD-10), considering deaths from external causes in ES and in the southern region of Espírito Santo. The following categories of external causes were selected: road traffic accidents, falls, other causes of accidental injuries, aggression and self-inflicted violence, considering all age groups and both sexes. After analyzing the data, it was found that, in Espírito Santo, aggression appears in first place in mortality from external causes, followed by homicide by firearms. While in the southern region of Espírito Santo, land transport accidents were observed. Therefore, it is necessary to pay specific attention to the region, starting from the analysis of local public policies, emphatically promoting actions and strategies already linked to existing policies, which aim to minimize the consequent effects of the occurrences of external causes.

Keywords: External Causes. Mortality. Health Policy.

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INTRODUCTION

The Brazilian public health scenario is characterized by different realities, and part of this context has the intrinsic participation of external causes (SOARES *et al.,* 2020). According to Garcia Filho and Sampaio (2014), accidents and violence, also known as external causes, began to emerge in the early 1960s, from the Union's desire to grow economically. However, the desire for growth is based on non-categorical planning and without political criteria, which favored the increase in inequality and social insecurity, and thus, caused by a state of exception, making crime more evident (VIERA; DUARTE NETO; SOGAME, 2019).

The search for economic development persisted and, in the 1980s, the unbridled expansion of the industrial sector favored the displacement of the rural population to large centers, occupying the peripheries in a disorderly and agglomerated way (VIERA; DUARTE NETO; SOGAME, 2019; SMARZARO, 2005). Thus, these housing conditions and unequal population distribution favored the increase in mortality from accidents and violence in this period (SMARZARO, 2005).

Consolidating this thought, Trugilho (2020) states that the disorderly and disorganized growth in urban life and consequent social inequality lead to an increase in the occurrence of violence in various social segments, demographic territories and with consequent damage to individual and collective health. For the author, the detailed appreciation of the historical, economic, social, and cultural context of structuring society makes it possible to understand violence in terms of its forms and extensions. According to Souza Júnior and Perera (2024), social inequality, lack of opportunities, and the exclusion of layers of the population feed a vicious cycle of insecurity and lack of prospects, fueling urban violence.

External causes are characterized by trauma, injuries, or other health problems, whether intentional or not, as an immediate consequence of violence or accident (SOARES *et al.,* 2020). This category includes injuries caused by transport events, homicides, assaults, drownings, falls, poisonings, burns, suicides, landslide or flood injuries, as well as occurrences caused by environmental circumstances (SOARES *et al.,* 2020).

From this perspective, it is understood that both accidents and violence are characterized by external causes and, accordingly, violence is understood as a social issue that occurs in human interrelations in people, families, groups, classes and nations, with the intention of harming, injuring, mutilating or killing the other, in the physical, psychological, or

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even spiritual (MINAYO *et al.,* 2018). Likewise, the Accident refers to the unintentional and avoidable event, causing physical or emotional injuries in the domestic sphere or in other social environments, such as work, traffic, school, sports and leisure (VIEIRA; DUARTE NETO; SOGAME, 2019).

According to Minayo (2006), violence is defined as an event of order experienced by manifestations arising from a strong emotional charge of those who commit it, the victim and those who witness it, since, inserted in the dimension of external causes, its existence in different contexts and historical moments is clear.

Health problems due to the occurrence of external causes affect the quality of life of victims and their families and also generate a direct burden on the economic and health sector (BARROS *et al.,* 2018). It is noted that victims of external causes are exposed to serious psychological, social and functional consequences, since the injuries resulting from these causes directly influence the quality of life, social life, as well as functional aspects in the execution of activities of daily living. Identifying the main types of external causes can guide the development of strategies to prevent the existence of these events (VIERA; DUARTE NETO; SOGAME, 2019).

It is worth mentioning that most victims of external causes need the assistance of the health service, either through pre-hospital care or, depending on the severity, hospital care. This scenario requires a great challenge and responsibility from the health authorities regarding the care logistics provided to this public (MASCARENHAS; BARROS, 2015). In addition to pre-hospital care, it is essential to understand the dimension of hospital care, which, according to Nery *et al.,* (2018), is the one that makes up the care context most used by most victims of external causes, due to the consequences on physical health. In 2019, the authors Batista, De Oliveira Júnior and Dantas, (2021) analyzed the data available in the Hospital Information System (SIH/SUS) and found that 54.3% of hospitalizations were due to external causes.

In view of the reality of health problems, and in some cases the outcome of death, according to De Godoy *et al.,* (2021) external causes were responsible for the death of more than 150 thousand people, corresponding to the third leading cause of death in the country and the third leading cause of hospitalizations by the Unified Health System (SUS). Silva *et al.,* (2017) and Minayo *et al.,* (2018) state that the consequences to the health of victims of external causes is a priority of the public health system, and it is necessary to develop strategies and actions implemented within the scope of the Unified Health System

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(SUS). Thus, on May 16, 2001, the National Policy for the Reduction of Morbidity and Mortality from Accidents and Violence (PNRMAV) was implemented, which has as one of its strategies to reinforce preventive actions, ranging from those pertinent to health promotion and strategies aimed at preventing the occurrence of violence and accidents, as well as practices attributed to the treatment of victims, and thus, prevent the emergence of sequelae and deaths due to these events (BRASIL, 2002).

Since the approval of the PNRMAV, the Ministry of Health (MS) has been developing actions related to external causes, due to the upward behavior of the proportion of deaths (AGRANONIK; FURSTENAU; BANDEIRA, 2017). These actions must be intersectoral and coordinated, and a fundamental vector for the execution of their purpose is attention to urgencies and emergencies (SOGAME; AXE; DUARTE NETO, 2020). In view of the above, the research aims to verify mortality from external causes in the state of Espírito Santo and in the southern region of Espírito Santo in the period from 2001 to 2019, as well as to understand how the reality evidenced can contribute to the (re)orientation of public policies.

METHOD

An exploratory, descriptive and quantitative research was carried out, based on a documentary analysis, having as main source of research the secondary data of public access available in DATASUS. Therefore, it was not necessary to request authorization from the CEP.

Information was collected regarding deaths from external causes in the State of Espírito Santo. For this, vital statistics were accessed, selecting mortality - 1996 to 2019, according to the International Statistical Classification of Diseases and Related Health Problems (ICD-10). Deaths between the years 2001 and 2019 were considered, time cut, taking into account the beginning of the implementation of the PNRMAV to identify the behavior of mortality in this period. The following categories of external causes were chosen: road traffic accidents, falls, other causes of accidental injuries, aggression and self-inflicted violence, considering all age groups and both sexes.

Subsequently, the data referring to the southern region of Espírito Santo were analyzed, as follows:

master plan for the regionalization of health – PDR of 2011, which covers 26 municipalities: Alegre, Alfredo Chaves, Anchieta, Apiacá, Atílio Vivacqua, Bom Jesus do Norte, Cachoeiro de Itapemirim, Castelo, Divino de São Lourenço, Dores do Rio Preto, Guaçuí, Ibitirama,

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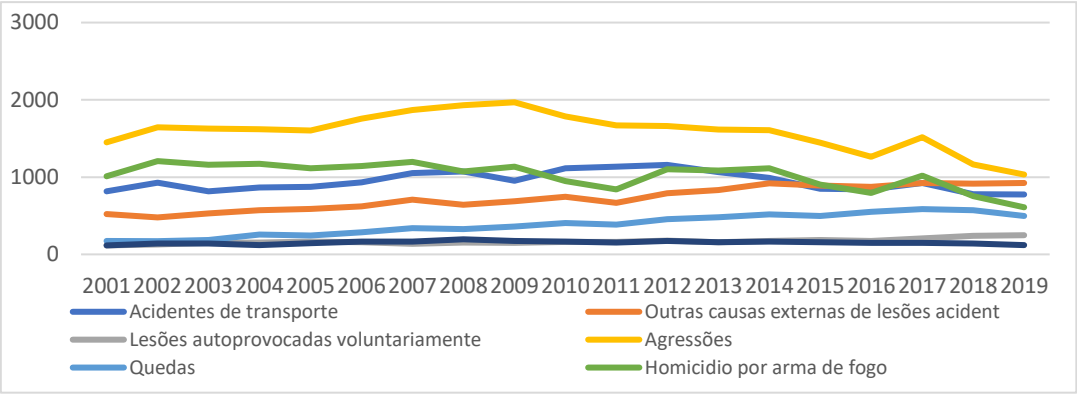
Iconha, Irupi, Itapemirim, Iúna, Jerônimo Monteiro, Marataízes, Mimoso do Sul, Muniz Freire, Muqui, Piúma, Presidente Kennedy, Rio Novo do Sul, São José do Calçado and Vargem Alta. These municipalities are grouped into three regions to facilitate public health actions (ESPÍRITO SANTO, 2011).

With the collected data, it was organized and analyzed, which allowed the achievement of the research objectives. The data were tabulated in a spreadsheet of the *Software Microsoft Excel* and analyzed descriptively through absolute frequencies. The results obtained were presented through graphs.

RESULTS

Considering mortality by types of occurrences of external causes in Espírito Santo between 2001 and 2019, it is noted that aggression appears in first place, followed by homicides (Graph 1) As for mortality by types of accidents, it is observed that road traffic accidents (RTA) and falls also stand out.

Graph 1 - Distribution of deaths by types of external causes in Espírito Santo between the years 2001 and 2019.



Source: Prepared by the author. Data extracted from the Ministry of Health. DATASUS, Vital statistics, deaths from external causes in Espírito Santo, 2001 to 2019 (BRASIL, 2021).

Graph 2 shows the distribution of deaths from external causes in the southern region of Espírito Santo and it is verified that accidental causes of the land transport accident (RTA) type were the most frequent in the period analyzed, followed by other accidental causes and aggression.

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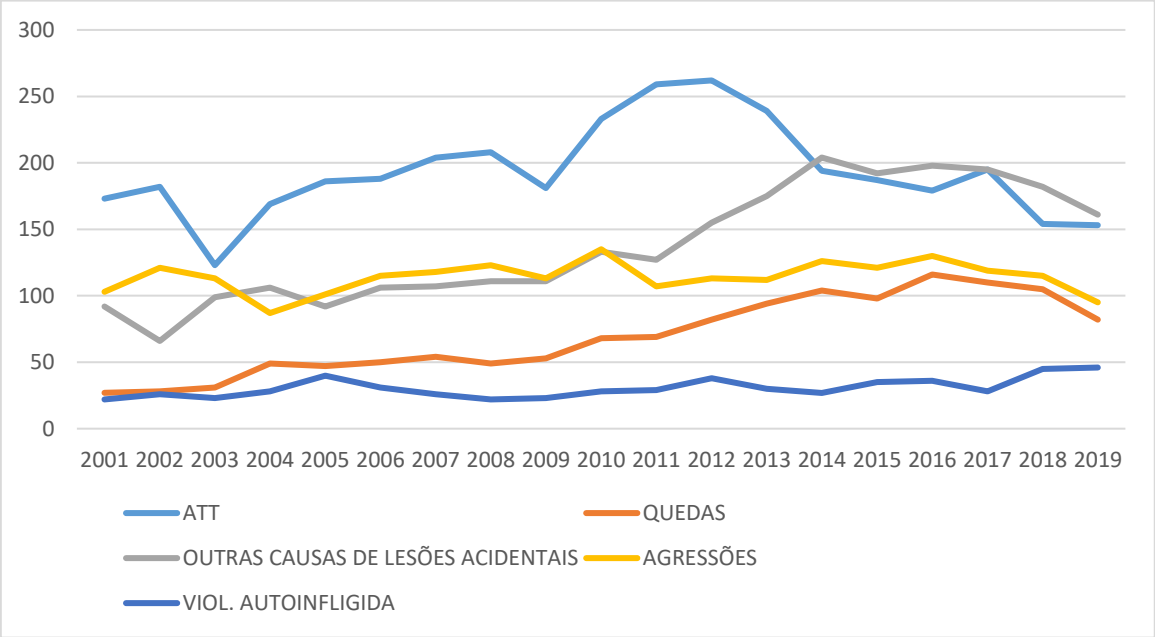
Graph 2 - Distribution of deaths by types of external causes in the South of Espírito Santo between the years 2001 and 2019.



Source: Prepared by the author (2021e). Legend: ATT: Land transport accident. Other causes of accidental injuries: exposure to inanimate mechanical forces; accidental drowning and submersion; other accidental risks to breathing; accidental exposure to other and unspecified factors

Graph 2 also reveals that, during the years 2001 to 2014, RTA led mortality from external causes in the southern region of Espírito Santo, however, from 2014 onwards this position began to be assumed by other causes of accidental injuries, understood as exposure to inanimate mechanical forces; accidental drowning and submersion; other accidental risks to breathing; accidental exposure to other and unspecified factors.

DISCUSSION

In the present study, aggression is among the main external causes of mortality from external causes in the state of Espírito Santo, a scenario that is also reflected in other regions of the country. According to Rodrigues and Arruda (2020), the reality of the north of the state demonstrates a high rate of deaths from aggression, representing 38.70% of the total deaths from external causes, according to data from DATASUS. This reflects existing social inequalities. This relationship between violence and social inequality is confirmed by Rios Júnior *et al.,* (2020), who, in a study in the city of Sobral, Ceará, identified aggression (49.25%) as the main cause of external death, followed by traffic accidents (28.33%), both driven by conditions of social vulnerability and fragility of public security.

In addition to aggression, another form of violence that stood out in the period studied was homicide by firearm. According to Espírito Santo (2019), there was an increase

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in the mortality rate from homicides with firearms from 76.66% in 2008 to 79.13% in 2013, with a decline to 77.12% in 2018. When analyzing the absolute numbers of deaths, we observed that, in 2008, there were 1,074 deaths, rising to 1,086 in 2013, but reducing to 752 in 2018, according to DATASUS. Complementing this analysis, IPEA (2020) pointed out that, when considering all types of homicides, the rate per 100 thousand inhabitants fell from 37.90% in 2017 to 29.3% in 2018 in Espírito Santo, a significant drop of almost 10%.

In 2017, the homicide rate was higher in municipalities with higher population density, such as Serra (65.2%), Cariacica (59.8%), São Mateus (54.9%), and Linhares (49.5%) (IPEA, 2020). These numbers indicate the presence of territories vulnerable to violence, formed by urbanization and economic development concentrated in the peripheries of urban centers of cities (SOGAME *et al.,* 2020). As the authors point out, homicidal violence is deeply rooted in a dynamic of socio-spatial segregation, where the division of classes by territories can aggravate the conditions of violence in peripheral regions.

Violence, present in both public and private spaces, is reflected in different segments of the population, interconnecting in a social process that strengthens its various facets (TRUGILHO, 2020). This scenario is marked by the social discrepancy resulting from urbanization and economic development, particularly evident in the urban peripheries, which become vulnerable areas to violence. Urban violence, in this context, is a phenomenon that stems from the process of economic development, with devastating impacts and that reflects, to a certain extent, a struggle for rights, equality, and ideological change (HIDALGO *et al.,* 2021). This process is corroborated by Souza Júnior and Perera (2024), who highlight that violence and insecurity are sequels of radical transformations in urban spaces and have become a challenge for public management.

Another prominent factor is traffic violence, which represents one of the main causes of hospitalizations and deaths in Brazil, according to the Ministry of Health (VIANA, 2013). From a broader perspective, traumas and injuries caused by traffic accidents are considered manifestations of violence, mediated by the use of vehicles in transport (VIANA, 2013). Thus, as government policy measures, in an attempt to solve the problem in question, actions recommended by the Ministry of Health were implemented, namely: Ordinance MS/GM No. 737/2001 – implements the National Policy for the Reduction of Morbidity and Mortality due to Accidents and Violence; Ordinance MS/GM No. 936/2004 – provides for the structuring of the National Network for the Prevention of Violence and

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Health Promotion; Ordinance MS/GM No. 1,356/2006 – institutes financial incentives for the Surveillance System for Violence and Accidents (Viva) in Sentinel Services; MS/GM Ordinance No. 1,271/2014 – defines the compulsory notification list that includes the notification of domestic violence and other forms of violence (TRUGILHO, 2020).

In addition to assaults and homicides, land transport accidents (RTA) and falls are also among the main causes of death from external causes in Espírito Santo. According to Espírito Santo (2017), in 2006, 2011 and 2016, these categories of external causes had the highest mortality rates in the state. A similar situation was observed in Minas Gerais, where, from 2001 to 2012, RTA accounted for 29.6% of deaths from external causes, followed by other accidental injuries (21.5%) and assaults (20.6%) (CORASSA *et al.,* 2017). In regions such as Santa Catarina, Tocantins, and Porto Velho, RTAs also lead the causes of death, according to studies by CARDOSO *et al.,* (2020), MESSIAS *et al.,* (2018) and CASTRO *et al.,* (2021).

In Espírito Santo, data from the VIVA Survey indicate that, in 2014, 93.5% of the attendances for external causes in the capital were due to accidental injuries, with 19.3% related to traffic accidents and 34.9% to falls. In 2017, attendances due to falls increased to 66%, an increase of more than 30% compared to 2014 (BRASIL, 2019). Similar results were observed in the state of Sergipe, where hospitalizations due to accidental causes, such as falls, accounted for 38.7% and land traffic accidents 21.9% between 2012 and 2017 (FERREIRA, OLIVEIRA, AND COUTINHO, 2019).

When examining mortality from external causes in the south of Espírito Santo, it is observed that the region was responsible for 14% of the total deaths for the entire state between 2001 and 2019, totaling 10,347 deaths, according to data from DATASUS (BRASIL, 2021). This high mortality is due, in part, to the intense flow of intercity and interstate vehicles on highways with little inspection and inadequate infrastructure, such as BR-101, which connects the state to Rio de Janeiro and São Paulo. This same reality was observed in other regions of Brazil between 2000 and 2010, when the vehicle fleet increased significantly, but the inspection and infrastructure of the highways remained deficient (MORAIS NETO *et al.,* 2012).

Another factor that contributed to the RTA mortality statistics being more evident in the southern region of Espírito Santo is the fact that the region is composed of the Cachoeiro Pole, according to the master plan for regionalization of the state of Espírito Santo (ESPÍRITO SANTO, 2011). In this pole, the municipality of Cachoeiro de Itapemirim

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stands out, characterized by a large population concentration (210,589 inhabitants), being responsible for 30% of the population of southern Espírito Santo and 57% of the Cachoeiro pole (IBGE, 2021). Being considered the most important urban center in the south of the State of Espírito Santo, the municipality is located at a distance of 136 km from the capital, and because it benefits from highways, such as BR-101, it allows the concentration and distribution of goods and services to neighboring municipalities (HISTÓRIA, 2021).

Thus, it is understood that, due to the intense vehicular turnover, both on BR-101 and on other highways that surround the Pole, land transport accidents become more common, thus contributing to mortality from external causes in the southern region of Espírito Santo (HISTÓRIA, 2021). This displacement of a significant number of people, mainly from the municipalities of the interior to Cachoeiro de Itapemirim in search of services and resources, can be characterized by the use of precarious means of transport, without proper inspection, added to inadequate highway infrastructure (MORAES NETO *et al.,* 2012).

From this analysis, taking into account the results of the research exposed above, it is noted that the main causes of death from external causes in the southern region of Espírito Santo differ from the context of the state of Espírito Santo. This occurs due to the differences in sociodemographic particularities and population distribution in the South region, as well as the social disparity existing in municipalities with high urban concentration, such as in the metropolitan region and north of the state, thus contributing to a higher number of deaths from violent causes

At the global level, the period from 2011 to 2020 was named by the United Nations (UN) as the Decade of Action for Road Safety, with the objective that each member country of the road safety plan should prepare a plan to define policies, programs, actions and goals to reduce deaths from traffic accidents by half in the period of ten years (DUARTE, 2020). Brazil adhered to this plan with the launch of the National Pact for the Reduction of Traffic Accidents – A Pact for Life in 2011 with the objective of reducing the mortality rate and other damage caused by traffic accidents, through awareness campaigns and educational actions, based on the perception of the habits and behaviors that people practice in traffic, and thus, adopt behaviors to change their attitude (DE ASSIS *et al.,* 2019). The Brazilian government had also previously promoted the National Policy for the Reduction of Morbidity and Mortality from Accidents and Violence (2001), the National Traffic Policy (2004) and the National Policy for Health Promotion (2006), in addition to

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participating in the Life in Traffic Project (2010), public initiatives that strengthened the implementation, in Brazil, of the Decade of Actions for Road Safety (DUARTE, 2020).

It can be seen that, from the data exposed above, we are far from achieving the goal of reducing traffic deaths and that a joint effort is needed, involving drivers and pedestrians, politicians and non-governmental institutions, frontline professionals and researchers, to change the reality of traffic in the state and in the country. Actions such as valuing public transport, the elaboration of strict traffic laws that can be enforced and monitored, vehicles with greater safety devices for the driver, passengers and pedestrians can make it possible to transform future contexts.

CONCLUSION

The study of mortality from external causes in Espírito Santo, especially in the southern region of Espírito Santo, between 2001 and 2019, reveals a worrying scenario of violence and accidents that significantly impact public health. Assaults, followed by homicides with firearms, traffic accidents and falls, were the main causes of death in the state. In the South, land traffic accidents (RTA) stood out as the leading cause of mortality. The analysis shows that the public policies implemented, such as the National Policy for the Reduction of Morbidity and Mortality from Accidents and Violence, have been crucial to address these problems, even though the challenges remain great.

Policies to promote health and safety, such as the National Pact for the Reduction of Traffic Accidents and the National Plan for the Reduction of Traffic Deaths and Injuries, were developed to mitigate mortality caused by RTA, especially in Espírito Santo. In addition, the implementation of surveillance and compulsory notification systems has been vital to monitor and respond appropriately to occurrences of violence and accidents. These measures, however, still face difficulties in implementation and need greater intersectoral articulation.

To change this reality, it is essential to strengthen the integration between existing policies, promote improvements in transport and health infrastructure, and increase the rigidity in the enforcement of traffic laws. Actions such as valuing public transport and the use of safety technologies in vehicles can be transformative. The success of these interventions depends on coordinated efforts between government, society and various sectors, in order to ensure effectiveness in combating mortality from external causes.

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