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RESEARCH ARTICLE

FIREARM HOMICIDES IN BRAZIL: ANALYSIS FROM 2000 TO 2013.

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Abstract

The aim of this study was to describe the data on firearm deaths in situations of violence in Brazil. Data collection and analysis are important in the formulation of public policies to combat the problem of firearm homicides. Methods: A descriptive ecological study was carried out using secondary data concerning firearm homicides in Brazil, based on the Mortality Information System - SIM, referring to the years 2000 to 2013. The analyzes were carried out for Brazil, by Brazilian regions stratified by sex and age in the years 2000 to 2013. Results: Data analysis of the period revealed an increase in the rates of firearms homicides in Brazil. The southeastern region is the only macro-region in which rates are declining, in contrast to the other regions with a considerable increase in homicide numbers. In males, death rates in all age groups were observed, being higher among adolescents. In women, rates can be seen in most age groups, with a fall pattern in 2007 and a return to growth behavior in the following years.

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Introduction:-

Approximately half a million people are murdered each year in the world. In addition to the significant number of homicide deaths, it is necessary to consider the great social reach of the consequences of this event. The deaths represent only a portion of the effect of homicides, the costs of violence are proportional to this act. The World Health Organization (2014) further considers that the situation of violence often permeates generations and involves factors such as the use of alcohol, illicit drugs, unemployment and school drop-out, which makes this a large and complex problem to be analyzed.

In Brazil, the regulation of the possession and use of firearms is found in the Disarmament Statute, expressed in Federal Law 10.826 of December 22, 2003, in force since then. Article 35 of the Federal Law, which prohibited the sale of firearms and ammunition in Brazil, was rejected in a referendum in 2005, when it was excluded from the Disarmament Statute. In October 2015, Brazil approved Law Bill (PL) 3.722 / 2012, which made the Disarmament Statute more flexible, providing new considerations and modifying rules regarding the acquisition, possession and possession of weapons and ammunition.

According to a study by Grinshteyn and Hemenway (2015), the rate of firearm homicides in the United States is 25 times higher than in other developed countries. Fowler et al. (2015) report that the expressive rates of firearms murder mortality in the United States represent an important public health problem.

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Considering the violence is a great challenge to be overcome and the new discussions on the possession of firearms in the country makes it necessary to describe the firearm homicides in Brazil in order to contribute information in this new moment of the country.

Methods:-

A descriptive ecological study was carried out, using secondary data referring to firearm homicides in Brazil, based on the Mortality Information System (SIM), referring to the years 2000 to 2013. The statistical data generated from the variables made available by the SIM allow for epidemiological analysis and construction of health indicators, which does not aid in health management and is concretized through effectiveness in directing and planning actions (MS, 2008; DATASUS, 2008).

In order to carry out the analysis, firearm deaths were selected, ie, the basic causes identified by the international classification of diseases (ICD-10) X93- Hand firearm assault, X94- Firearm assault firearm of higher caliber and x95- Aggression firing another firearm or unspecified. Calculations of firearms homicide rates were carried out and the population data of the 2000 and 2010 Censuses and the intercensal estimates for the remaining years were used. All data was generated through DATASUS.

Homicide rates were calculated by dividing the number of resident deaths per firearm by the total resident population adjusted for the middle of the year, multiplied by one hundred thousand. The analyzes were performed for Brazil, by Brazilian regions, stratified by sex and age in the years 2000 to 2013.

Results:-

The analysis of the absolute numbers of firearms homicides in Brazil from 2000 to 2013 shows that the number of occurrences in the country was 30865 in the year 2000 and 40369 in the year 2013, that there were the highest number of victims in the period studied. In the year 2000, the macro-region with the highest number of cases was the Southeast region, with 18192 occurrences, and in 2013 the Northeast was the region with the highest number of cases, with 17,002 cases. (Table 1).

Table 1:- Absolute values of deaths by firearms according to the country's macro-region. Brazil, 2000 to 2013.

Region	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
North	1,201	1,389	1,535	1,689	1,784	2,023	2,305	2,348	2,893	3,248	3,814	3,555	3,743	3,639
Northeast	6,561	7,571	7,713	8,555	8,100	9,221	10,370	11,410	12,716	13,608	14,171	14,572	16,132	17,002
Southeast	18,192	19,336	19,363	19,929	18,247	16,062	15,920	13,598	12,477	12,011	11,395	11,025	11,883	11,753
South	2,565	2,881	3,184	3,527	3,721	3,892	4,040	4,323	4,846	4,829	4,609	4,379	4,661	4,181
Center-West	2,346	2,224	2,365	2,415	2,335	2,221	2,286	2,468	2,744	2,928	2,803	3,206	3,658	3,794
Total	30,865	33,401	34,160	36,115	34,187	33,419	34,921	34,147	35,676	36,624	36,792	36,737	40,077	40,369

Considering the population residing in each of the macro regions in the year 2000, the Southeast had the highest rate of firearm homicides in the country, and in 2013 the Northeast region showed the highest rate, and this year the lowest rates in the country were observed in the Southeast region. It was visualized that the rates follow the growth or reduction of absolute numbers by region. The trend of homicide rates showed growth behavior between 2000 and 2013 in the North, Northeast, South and Central-West regions. In the Southeast region, this behavior was characterized by a decline.

In the survey of information on the absolute numbers of firearm homicides in males, an increase of 31.5% was observed in Brazil, with the highest percentage growth occurring in adolescents aged 15 to 19 (48.3%), followed for those under 14 years of age (47%). However, all age groups show an increase in the number of homicides among men.

The highest rate of homicide by firearm among men in the country is observed among individuals in the age group of 20 to 29 years, followed by the age group of 15 to 19 years. In the studied period, there was a progressive increase in the rates in the age groups that comprise the individuals between 15 and 39 years.

Among women, there was a 14.4% increase in the absolute number of homicides with the use of firearms. A greater increase in the number of occurrences was observed in the age group from 50 to 59 years (50%), followed by the age group of 20 to 29 years (30.5%). The highest number of occurrences between 2000 and 2013 was observed in the year 2012, which shows a downward trend in the last year analyzed. The age groups for women under the age of 14 and for women between the ages of 40 and 49 presented a decline of 22.5% and 1.5%, respectively.

The highest rate of firearm homicide among women between 2000 and 2013 is in the 20-29 age bracket, followed by the age group 30-39. Homicide rates fluctuated during most of the observed period, but a pattern of decreasing rates was observed among the most representative age groups in 2007, with a subsequent increase in most rates (except in women between 40 and 49 years) in 2008. The trend of homicide rates showed a growth behavior in the age groups that comprise women between 15 and 29 years.

Discussion:-

The results show that homicide rates with the use of firearms have increased in Brazil. The growth observed in the period from 2000 to 2013 was of the order of 30.7%, which shows that there is a constant increase in the number of cases, but this growth happens in a slower way when compared to the previous years. The data found in the present study represent a deceleration in the growth observed between the years 1980 and 1999, which was 258.1% (Waiselfisz, 2015).

After reviewing the literature seeking to clarify the effect of the availability of weapons on crime, Cerqueira (2010) found that, at the international level, there is a consensus that there is a positive relation between the diffusion of firearms and the occurrence of homicides by this means, highlighting that the possession of the firearm makes the victim more vulnerable by making available to the aggressor this means of action during the situation of violence. Cerqueira (2010) points out the simultaneity in the cause and effect relation with regard to the use of firearms and crime, reporting that it would be possible for both a larger population armament to generate crime and a higher level of crime greater demand for the use of firearms. In light of this concept, if crime and criminogenic factors appear to drive firearms, actions against factors of origin of crime could have a direct impact on the number of homicides, which would be more significant than the regulation on the use of firearms.

The Southeastern region has shown a consistent decline in the rates of firearm homicides, contrasting with the other regions, which show growth. The absolute number of occurrences decreased by 35.3%. It is observed that the southeastern region presented the highest rates of the country in the year 2000, already in the year of 2013 the rates have been reduced to the smaller ones of the Brazilian territory. According to Waiselfisz, the observed falls in the region are mainly due to the reduction of occurrences in the state of São Paulo, whose numbers in 2012 decreased by 58.6% in relation to 2002, and also due to the numbers of Rio de Janeiro, which decreased by 50.3%. Minas Gerais did not meet this pattern of decreases, with an increase of 53.7% in the period from 2002 to 2013.

The decline in the number of cases in the state of São Paulo coincides with a series of measures adopted by the state government with the objective of reducing crime and situations that offer it, having an impact on the statistics related to the use of firearms. Nadanovsky (2009) reports that the increase in the incarceration of criminals in the State of São Paulo causes a decrease in crime, which would consequently be linked to a decrease in the use of firearms in situations of violence.

In males, the highest growth in absolute numbers relative to firearm homicides in Brazil was verified in individuals under 20 years of age. According to Saporì (2012), adolescents are showing a greater insertion in the cycle of violence, which provides for the use of firearms, due to the strengthening and structuring of the drug trafficking system, mainly crack, in communities where there is a situation of social vulnerability.

For Philips (2006), however, the association between homicide rates and the age composition of the population becomes insignificant when the other socio-demographic indicators are controlled. Among women, there was an increase in homicide rates in most of the age groups, with the exception of those younger than 14 years and between 40 and 49 years.

The literature points out that women are at greater risk of suffering violence from close associates (PAHO, 2012) and most female homicides are committed within the victim's home (Silva et al., 2011). Costa et al. (2007) affirm that this event is related to the length of stay of the woman in the home environment and consequently to the greater risk of suffering aggressions in this environment.

Due to the increasing number of cases of domestic violence against women, Law No. 11,340, popularly known as the Maria da Penha Law, was sanctioned on August 7, 2006 in Brazil. Female firearm mortality rates declined slightly in the year following which the Maria da Penha Law came into force, and oscillated again in later years, since it corroborates with the literature (Garcia, Freitas and Höefelman, 2013).

For Murray, Cerqueira and Kahn (2013) it is necessary that the data to be studied are precise and specific, so that more effective measures can be taken to reduce crime and violence, as the increasing number of homicides represents increase in cases of armed violence.

From this context it is concluded that different government segments must act in an articulated way so that there is systematization of actions that imply in the inhibition of the use of firearms. Violence presents itself as a multifactorial situation, which requires a broader view than just the issue of disarmament. As a limitation of the study can be identified that it did not use standardized rates and the data may have some registration problem.

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