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SOCIODEMOGRAPHIC PROFILE OF SUICIDE MORTALITY PERFIL SOCIODEMOGRÁFICO DA MORTALIDADE POR SUICÍDIO PERFIL SOCIODEMOGRÁFICO DE LA MORTALIDAD POR SUICIDIO

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ABSTRACT

Objective: to analyze the sociodemographic profile of suicide mortality. **Method:** a quantitative, descriptive and documentary study, consisting of 619 suicide deaths, in the Mortality Information System, from 2001 to 2013. The data collection was done through a form extracted from the death certificate. The data were analyzed in the program Microsoft Excel/Word 2010, presented in tables and analyzed with descriptive statistics. **Results:** there was male prevalence (coefficient: 9.37/100 thousand inhabitants); with 60 years or more (coefficient: 10.22/100 thousand inhabitants); of brown color (65.91%); with four to seven years of study (27.94%) and single civil status (53.79%). The majority of the deaths were by hanging (71.09%) and the place of occurrence, the home (71.15%). **Conclusion:** the results reveal the need to carry out a detailed study, using the strategy emerged from the local reality. **Descriptors:** Suicide; Epidemiology; Statistics; Numerical Data; Nursing.

RESUMO

Objetivo: analisar o perfil sociodemográfico da mortalidade por suicídio. **Método:** estudo quantitativo, descritivo e documental, constituído de 619 óbitos por suicídio, no Sistema de Informação Sobre Mortalidade, no período de 2001 a 2013. A coleta de dados foi realizada por meio de um formulário extraído da declaração de óbito. Os dados foram analisados no programa Microsoft Excel/Word 2010, apresentados em tabelas e analisados com estatística descritiva. **Resultados:** houve prevalência do sexo masculino (coeficiente: 9,37/100 mil habitantes); com 60 anos ou mais (coeficiente: 10,22/100 mil habitantes); de cor parda (65,91%); com quatro a sete anos de estudo (27,94%) e estado civil solteiro (53,79%). A maioria dos óbitos foi por enforcamento (71,09%) e o local de ocorrência o domicílio (71,15%). **Conclusão:** os resultados revelam a necessidade de realização de um estudo minucioso utilizando-se a estratégia emergida da realidade local. **Descritores:** Suicídio; Epidemiologia; Estatística; Dados Numéricos; Enfermagem.

RESUMEN

Objetivo: analizar el perfil sociodemográfico de la mortalidad por suicidio. **Método:** estudio cuantitativo, descriptivo y documental, constituido por 619 muertes por suicidio, en el Sistema de Información sobre Mortalidad, en el período de 2001 a 2013. La recolección de datos fue realizada por medio de un formulario extraído de la declaración de óbito. Los datos fueron analizados en el programa Microsoft Excel/Word 2010, presentados en tablas y analizados con estadística descriptiva. **Resultados:** hubo prevalencia del sexo masculino (coeficiente: 9,37/100 mil habitantes); con 60 años o más (coeficiente: 10,22/100 mil habitantes); de color parda (65,91%); con cuatro a siete años de estudio (27,94%) y estado civil soltero (53,79%). La mayoría de las muertes fueron por ahorcamiento (71,09%) y el lugar de ocurrencia, el domicilio (71,15%). **Conclusión:** los resultados revelan la necesidad de realización de un estudio minucioso, utilizando la estrategia emergida de la realidad local. **Descriptores:** Suicidio; Epidemiología; Estadística; Datos Numéricos; Enfermería.

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INTRODUCTION

World statistics have revealed that, approximately one million people die each year from suicide, producing an overall rate of 16 deaths per 100,000 inhabitants, significantly higher than those from combined wars and homicides.¹

A study has revealed that, in several countries, death due to suicide in the elderly has been shown to be a major public health problem, with the main reason being the worldwide increase of this population. In view of this proposition, the World Health Organization in Brazil has observed a greater vulnerability to suicide for males, with rates ranging from 19.2/100 thousand inhabitants, in the age group from 15 to 24 years, to 55, 4/100 thousand inhabitants, for men over 75 years, in the decade of 2000.²

Globally, suicide mortality has increased at a rate of 60% in the last 4.5 decades. In the largest number of countries, suicide stands out among the top ten causes seen as the most common among deaths and among the two or three most frequent among adolescents and young adults.³

The suicide rate per 100,000 inhabitants, in most countries in South America, is below 6.5. In France, Sweden, Russia, China and Japan, rates are estimated to be above 13. The Baltic countries have rates ranging from 32 to 32 percent, and the United States, Canada, Portugal, Spain, Germany, 42, such as Lithuania (41.9), Estonia (40.1), Russia (37.6), Latvia (33.9) and Hungary (32.9) and are highlighted as the first average suicide per 100,000 inhabitants, while Guatemala, the Philippines and Albania are on the reverse side, with the lowest rates, ranging from 0.5 to 2.⁴

Brazil shows a general suicide rate that is low when compared to other countries (71st), and therefore ranks ninth in the ranking of leading countries in absolute terms of death by suicide.⁵ Still referring to Brazil, it was announced that occurred in 2007, 131,032 deaths from external causes (accidents and violence). Of this total, suicide represented the numerical value of 8,868 deaths, 6.8% of deaths from external causes, with a specific mortality rate of 4.68 deaths per 100,000 inhabitants.⁵

Suicidal behavior has a considerable impact on health services, and statistics show that 1.4% of the global burden is associated with illness and that in 2002 it occurred due to suicide attempts. This percentage should approach 2.4% in 2020.³

Reports of suicide in the Northeastern region appear worrisome, and deaths from this cause went from 1,049 to 2,109, between 2003 and 2013, ie more than doubled in the period, reaching a percentage of 109%. In this region, three states, Paraíba, Piauí and Sergipe, more than tripled their numbers. Bahia, Ceará, Maranhão and Rio Grande do Norte more than double. In this scenario, Piauí ranks fifth in suicide numbers in Brazil, according to data released by the Ministry of Health in January of this year. In Teresina, every 100,000 inhabitants, 6.8 commit suicide every year.⁶

Over a period of ten years, in Piauí, there was an increase of 221.7% in cases of suicide deaths. It is the highest index in the Northeast region, according to the Map of Violence/2011, done by the Ministry of Justice. The alarming data, recorded only in Teresina, increase the percentage of the State. The capital of Piauí is the second of the country with the highest rate of suicides among the young population: 14.4 suicides for each group of 100 thousand inhabitants. Teresina loses only to Boa Vista, in the state of Roraima, which recorded 15.7 suicides per 100,000 inhabitants, among the young population, aged 15 to 24 years.⁷

In Teresina (PI), Brazil, a study was carried out, characterizing suicide cases in a capital city of the Brazilian Northeast, in 2007, in which 244 reports of suicide deaths were analyzed (Death by Voluntary Self-Injury - ICD 10). Regarding the Number of Cases per Year (NC/Year), in 2000, 32 were detected; in 2001, 44; in 2002, 38; in 2003, 38; in 2004, 55, and in 2005, 37. In the DATASUS database, 211 cases of death due to Voluntary Self-harm (ICD-10) were found in Teresina - PI.⁸

OBJECTIVE

- To analyze the sociodemographic profile of suicide mortality.

METHOD

uantitative, descriptive and documentary study, consisting of secondary data. Deaths from residents in Teresina, from 2001 to 2013, were recorded in the Mortality Information System (MIS), which had, as a basic cause, death by suicide. The statistical data were obtained from the municipality of Teresina, capital of the State of Piauí, located in the northeastern region of Brazil, with a population of 814,230 inhabitants, 94.27% of urbanized area, 1,392 Km² of area and 584.95 hab/km², according to the 2010 census of the Brazilian Institute of Geography and Statistics. The municipality of Teresina is located in the

north-central Piauí mesoregion, constituting a transition band between the northeastern semi-arid region and the Amazon region. It is the first planned Brazilian capital, and its foundation was officialized on August 16, 1859.

The study population consisted of all the suicides of Teresina residents, inserted in the database of the Information System on Mortality (MIS), in the period 2001-2013, totaling 619 records, in the age group of 18 years and above age. The choice of the period of 12 years, from 2001 to 2013, occurred due to the existence of data referring to ICD-10: X60-X84, in the Local Mortality Information System, only from that period.

Only the records that presented the International Statistical Classification of Diseases and Related Health Problems (ICD-10) were included: X60-X84 (self-inflicted lesions) and residents of Teresina.

Data collection was carried out in March 2016. The collection instrument consisted of a previously prepared form with information on the sociodemographic and epidemiological characterization of mortality, according to the International Statistical Classification of Diseases and Related Health Problems - CID - 10 (X60-X84), existing in the database, taking into account variables such as: age, race/color, marital status, schooling per year studied, sex, previously established disease, suicide site and means used for suicide.

For the calculation of the mortality rate, it was standardized in four years for the period from 2001 to 2013, and the following categories were used: Specific Mortality Rate (total number of deaths over the population x 105); Mortality Rate by Sex (number of deaths of a given sex over the same sex population x 105) and Mortality Rate by Age (number of deaths of a given age group over the population of this group x 105). For these calculations, the 10th revision of the International Classification of Diseases (ICD-10) was used, including categories X60 to X84 (intentional self-harm). The age groups were grouped into six major groups: a) ten to 19 years; b) 20 to 29 years old; c) 30 to 39 years; d) 40 to 49 years; e) 50 to 59 years; f) 60 years or more.

Mortality rates were obtained from the death statistics published by the Department of Informatics of the Brazilian National Health System (DATASUS) ⁹. Population data were obtained from the Brazilian Institute of Geography and Statistics (IBGE) ¹⁰. The different means used for suicide were grouped into the following categories: poisoning, drowning, firearm, white weapon, intentional

drop, firing and others (impact of vehicles, smoke and gas).

The data were recorded in a Microsoft Excel spreadsheet and then transferred to the statistical software Startistical Product Service Solutions (SPSS) - version 20.0. The results were presented in tables and graphs. The statistical analysis was of the descriptive type, by means of the reading of the absolute (N) and relative (%) frequencies, coefficient of mortality, in the quadrienians from 2001 to 2013, according to quantitative variables. The results were then confronted with the theoretical framework.

The study complied with the determinations recommended by Resolution 466/2012 of the National Health Council (NHC), which regulates research involving human subjects and was approved by the Research Ethics Committee of the Federal University of Piauí, with CAAE No. 54284416.6.0000.5214 and Opinion No. 1,755,853.¹¹

RESULTS

Table 1. Coefficient of suicide mortality per 100 thousand inhabitants of Teresina, according to sex and age group, from 2001 to 2013. Teresina (PI), Brazil, 2017

Indicators	2001-2004		2005-2008		2009-2013		2001-2013	
	Coef*	N	Coef	N	Coef	n	Coef	n
	7.37	178	6.89	180	7.52	261	7.29	619
Sex								
Male	8.73	122	8.30	125	10.68	205	9.37	452
Female	3.53	56	3.23	55	2.57	56	3.05	167
Age group								
10 to 19 years	4.58	32	3.99	27	2.59	19	3.70	78
20 to 29 years	8.84	52	7.52	50	9.83	85	8.83	187
30 to 39 years	6.77	30	8.20	40	10.11	68	8.60	138
40 to 49 years	7.20	23	6.68	24	6.47	33	6.73	80
50 to 59 years	11.68	21	8.26	18	6.51	23	8.25	62
60 years and +	10.79	20	10.26	21	9.87	33	10.22	74

*Coef= Coefficient of mortality per 100 thousand inhabitants. Source: MIS/Teresina (PI).

Table 2. Distribution of the frequency of socio-demographic characterization of suicide of residents in Teresina in the period 2001-2013. Teresina (PI), Brazil, 2017.

Variables	n	%
Ethnicity		
White	127	20.51
Black	48	07.75
Brown	408	65.91
Ignored	34	05.49
marital status		
Not married	333	53.79
Married	203	32.79
Widower	022	03.55
Judicially separated	024	03.87
Other	010	01.61
Ignored	025	04.03
Education		
No schooling	53	8.56
From 1 to 3 years of studies	103	16.6
From 4 to 7 years of studies	173	27.94
From 8 to 11 years of studies	152	24.55
12 years and older	94	15.18
Ignored	42	6.78

Source: MIS/Teresina (PI).

Table 3. Distribution of suicide profile frequency, according to the means used and place of occurrence, of residents in Teresina, from 2001 to 2013. Teresina (PI), Brazil, 2017.

Variables	n	%
Means used for suicide		
Hanging	443	71.09
Poisoning	69	11.14
Fire gun	63	10.17
White gun	07	1.13
Intentional decline	19	3.06
Drowning	07	1.13
Set fire	07	1.13
Other ways	04	0.64
Place of occurrence		
Hospital	74	10.33
Residence	459	71.15
Public highway	18	2.90
Others	68	15.62

Source: MIS/Teresina (PI).

DISCUSSION

The World Health Organization (WHO) recognizes suicide, especially among men and, in particular, the age group comprising those over 60 as a public health problem. The record of deaths and injuries due to violence in Brazil has shown that, in all age groups, men are prominent as victims and perpetrators, with all subcauses being observed, especially among the elderly.¹²

In a cross-sectional ecological study, using a Spatial Analysis technique, carried out from 1998 to 2002, taking as a unit of analysis the 91 municipalities of Rio de Janeiro, despite the discrepancies in relation to the population size and characteristics socioeconomic variables, when confronted with Teresina, the authors found the following findings: the suicide rate in the State of Rio de Janeiro was 4.41, ranging from 0.00 to 28.07 per 100 thousand among its municipalities men and, for the opposite sex, 1.34, with inter-municipal variation of 0.00 to 10.25 per 100 thousand women, resulting in 1,508 deaths in males and 497 deaths in females, which made this state contribute, in the period in question, with 5.6% of the suicides in Brazil. This research shows that Teresina has a similar reality to some of the municipalities of Rio de Janeiro.⁴

In an ecological study, whose outcome was suicide mortality in the historical series from 2002 to 2010 and the independent variables were indicators of labor activity and mental suffering in six Brazilian metropolises, the researchers found the following results: suicide among the six metropolis studied was higher in Porto Alegre, with an average of 6.5/100 thousand inhabitants, followed by São Paulo and Belo Horizonte, both with 4.3/100 thousand. The male sex showed a high prevalence, with increasing average values in Porto Alegre (11.6/100 thousand men), followed by São Paulo, with 7.1/100 thousand men. Among females, the high mortality rate was found in Porto Alegre (2.6/100 thousand women), Belo Horizonte (1.9/100 thousand women) and São Paulo (1.8/100 thousand women). that corroborate this study.⁶

In a descriptive, retrospective, quantitative approach on mortality from external causes in young adults in Teresina-PI, from 2001 to 2011, based on official and secondary data from the Department of Information Technology of the Unified Health System (DATASUS) and the Mortality Information System (MIS) of the Ministry of Health, the most revealed sociodemographic characteristics were race/color brown

(70.67%), followed by white (12.82%), single civil status (71.74%), then married (21.89%) and schooling, with a majority between four and seven years of schooling (35.82%), followed by schooling from eight to 11 years (22.63%), information similar to this study.¹³

In a study carried out in the Barbacena microregion, using a population from the period 2003 to 2009, similar data were obtained with the current research, a growing percentage of deaths due to suicide in the brown color/race (10.1%), followed in the period 1980 to 2005, the authors did not manage to link race/color as a factor for suicide, considering that 50% of the records did not presented this variable. But the researchers observed that the determinants of social inequalities may be related to suicide rates, according to the socioeconomic situation of each Brazilian region included in this study.¹⁵

According to the study carried out in ten Brazilian municipalities, with a population of elderly people who died of suicide, 7% were found to have basic education, similar information to that of this study.¹²

Understanding the phenomena that contribute to the recent increase in suicide rates may enable more effective measures to be taken. This requires further in-depth studies on the causes of suicide, as there is still little epidemiological literature on the subject.¹⁵

As for the means used to commit suicide death, it was observed that in Teresina, in the last nine years, it was the hanging mode (66.0%), accompanied by a firearm (13.1%) and poisoning (11 , 9%), corroborating with the current study.⁸

In a descriptive epidemiological study, comprised of data on suicide mortality and hospital admissions for suicide attempts of residents of Minas Gerais, aged between 10 and 19 years, of both sexes, with information from the Information System (MIS), Ministry of Health/Department of Analysis and Data Tabulation of the Unified Health System (DATASUS), from 1980 to 2002, it was detected that, between 1996 and 2002, the main the outcome of the suicide act by men was hanging/strangulation/suffocation (1.1 deaths/100,000 inhabitants), followed by firearms (0.6 deaths/100,000 inhabitants). Among women, the means were hanging/strangulation/suffocation and autointoxication, with rates equal to 0.3 deaths/100,000 inhabitants, variables reported in several Brazilian capitals.¹⁶

In a descriptive and retrospective epidemiological study, with secondary data,

consisting of deaths of residents in Minas Gerais, in the period of 1997 and 2011, registered in the Mortality Information System through the Department of Informatics of the Unified Health System. The following findings were found: in the historical regions, 49.0% of the deaths had as a means of hanging, strangulation and suffocation (X70); 17.8%, as intentional autointoxication (X60 to X69) and 13.3%, as hand firearm firing (X72 to X74), information identical to that observed in this study.¹⁷

Regarding the place of occurrence of suicide, similar findings were found in a survey conducted in the interior of São Paulo. With information from the DATASUS database, the authors observed that the deaths occurred between 1996 and 2001 had a strong relation with the means used, hanging (75.7%), and only 12.9% arrived at the hospital. In the deaths by firearms, and 46.8% occurred at home, 50% of which in the hospital setting. Poisonings, with only 25%, with a predominance of death in the hospital (70.8%).

In a study carried out in Brazil, in order to present the mortality rates, from 1980 to 2006, the authors observed that of the total deaths that occurred in the home, 64.5% were by hanging and 17.8%, by firearms. Of these deaths, only 7.0% of the hanging cases died at the hospital, accounting for the use of firearms, in which 28.7% died in a hospital. As for death due to poisoning, 37.1% occurred in a hospital, compared to only 5.8% at home. On the public highway, the death rate for firearms (24.7%) was surprising, representing a total of 6.3% of this death in the hospital.¹⁶ These revelations show that psychological, biological, economic and sociocultural factors make suicide a complex phenomenon.

CONCLUSION

The majority of suicides occurred in males, with the highest coefficient of mortality in the age group of 60 years or more, followed by the population of young adults, of brown color, elementary school, singles, and the most used means for the conclusion of the suicide was hanging, accompanied by poisoning, and that most deaths from suicide occurred at home, followed by the hospital.

The study shows the characteristics of the suicide cases in Teresina as an important public health problem that needs to be studied in detail, through strategies emerging from the local reality, since suicide brings, as a risk factor, the formation of the human being in their historical/cultural and socioeconomic conviviality, in addition to

some well-perceived factors, such as depressive disorders, and alcohol/drug abuse/dependence and social isolation. The results of this study recommend that greater integration between the ideological pillars of the State, education, health, religion and, above all, the family, is necessary for a better efficacy in suicide prevention.

In this study, when compared to a survey carried out also in Teresina, nine years ago, it was noticed that there were no significant changes in the characteristics of death cases, showing that death rates remained stationary, placing the municipality in fourth place when confronted with all deaths due to violent causes. This reality shows the need for commitment of basic care in the applicability of prevention and health promotion to the entire affiliated community.

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