DOI: http://dx.doi.org/10.18569/tempus.v11i1.2016

# Perfil epidemiológico das tentativas de suicídio em Palmas-Tocantins, de 2010 a 2014

# Epidemiological profile of suicide attempts in Palmas- Tocantins, 2010-2014

# Perfil epidemiológico de intentos de suicidioen Palmas, Tocantins, 2010-2014

Daniela Aparecida Araujo Fernandes [1]
Neci Sena Ferreira [2]
José Gerley Diaz Castro [3]

**RESUMO: Objetivo**: Descrever o perfil epidemiológico das tentativas de suicídio notificadas em residentes de Palmas, no período 2010/2014. **Métodos**: Estudo epidemiológico descritivo/quantitativo, utilizando dados do Sistema de Informação de Agravos de Notificação (SINAN). **Resultados**: Foram 656 notificações: 67,1% feminino e 32,9% masculino. As faixas etárias 21-30 anos (38,3%), 10-20 (30,2%) e 31-40 (17,5%) apresentaram as maiores frequências. Quanto à raça/cor 68,60% declararam-se parda, 20,43% branca, 4,42% preta, 4,42% amarela. Escolaridade se concentra em 23,47% no Ensino Médio completo, e 19,5% no incompleto. Situação conjugal: 53,81% de solteiros, 28,3% casados/união estável e 5% de separados. Ocupação profissional: estudantes (19,66%) e donas de casa (16,46%) apresentaram frequências mais elevadas. Identificaram-se diferentes tipos de deficiência/transtorno mental em 23,47% e outras deficiências em 5,17%. Envenenamento/intoxicação foi o meio de autoagressão mais utilizado (56,33%). **Conclusão**: Os registros de tentativas de suicido em Palmas estão acima da média nacional, o que sugere a necessidade de estratégias de promoção/prevenção e intervenção para redução da morbimortalidade.

**Palavras-chave:** Tentativa de suicídio. Violência. Perfil de saúde. Sistemas de Informação em Saúde. Políticas Públicas de Saúde.

1 Psicóloga - CRP 890, Mestre em Psicologia, Especialista em Saúde Coletiva- Moralidade de Residência Residente Multiprofissional em Saúde- Saúde Mental. Fundação Escola de Saúde Pública de Palmas (FESP) e Centro Universitário Luterano de Palmas (CEULP/ULBRA).

2 Fundação Escola de Saúde Pública de Palmas e Universidade Federal do Tocantins

3 Fundação Escola de Saúde Pública de Palmas e Universidade Federal do Tocantins

**ABSTRACT: Objective**: To describe the epidemiological profile of suicide attempts reported in Palmas residents in the period 2010-2014. **Methods**: A descriptive/quantitative study was performed using -Notification of Injury Information System (SINAN). **Results**: There were 656 notifications, 67.1% female and 32.9% male. The age groups 21-30 years (38.3%), 10-20 (30.2%) and 31-40 (17.5%) had the highest frequencies. Regarding race / color, 68.60% of them are brown, 20.43% White, 4.42% Black, 4.42% yellow. Education focuses on full High School, 23.47% and incomplete, 19.5%. Marital status 53.81% single, 28.3% married / stable and 5% separated. Occupation, students (19.66%) and housewives (16.46%) had higher frequencies. It identified different types of disabilities / mental disorder in 23.47% and other shortcomings by 5.17%. Poisoning / intoxication was the most popular means of self-harm (56.33%). **Conclusion**: The records of suicide attempts in Palmas are above the national average which suggests to promote strategies / prevention and intervention to reduce morbidity and mortality.
**Keywords:** Attempted Suicide, Violence, Health Profile, Health Information Systems, Public Health Policy.

**RESUMEN: Objetivo**: describir el perfil epidemiológico de los intentos de suicidio en Palmas en el período de 2010 a 2014. **Métodos**: estudio descriptivo/cuantitativo utilizando datos del Sistema de Información de Enfermedades de Declaración Obligatoria (SINAN). **Resultados**: hubo 656 notificaciones, de las cuales 67,1% mujeres y 32,9% hombres. Grupos de edad: 21-30 años (38,3%), 10-20 (30,2%) y 31-40 (17,5%) tuvieron las frecuencias más altas. Considerando la raza/color, 68.60% se consideran de color marrón, 20.43% blancos, 4.42% Negro, 4,42% amarillo. Presentan escolarización en escuela secundaria completa un 23,47% e incompleta 19,5%. Estado civil: 53,81% soltero, 28,3% casado/unión de hecho y 5% separados. Ocupación: estudiantes (19,66%) y amas de casa (16,46%) tenían frecuencias más altas. Se identificaron diferentes tipos de discapacidad/trastorno mental en 23,47% y otras deficiencias en 5,17%. Envenenamiento/ intoxicación fue el medio más común de autolesiones (56,33%). **Conclusión**: los intentos de suicidio en Palmas son mayores que la media nacional, por ello, existe la necesidad de estrategias para la promoción/prevención e intervención, para reducir la morbilidad y la mortalidad.
**Palabras-clave:** intento de suicidio; violencia; perfil de salud; sistemas de información en salud; políticas públicas de salud.

## 1-INTRODUCTION

Accidents and violence are denominated by the World Health Organization (WHO) as *external causes*. They are health problems that may or may not lead to death, or cause physical and/or psychological injuries and/or trauma. External causes are the third largest cause of mortality in the general population and the first in the range of 1 to 39 years in 2009[1]. In the city of Palmas, external causes were the first cause of death in the resident population in 2013, according to data from the Mortality Information System (MIS). Among the external causes are the intentional self-

inflicted suicides/injuries, codified through the International Statistical Classification Diseases and problems related to health - CID 10 (X60 to X84).

The term self-inflicted violence is synonymous with self-inflicted violence, and it is subdivided into suicidal behavior and self-abuse. The first includes suicidal thoughts, suicide attempts - also called “parassuicide” or “deliberate self-harm” in some countries - and completed suicides. Self-abuse includes acts such as self-mutilation[2]. Suicide attempts should be seen as a very serious situation and be interpreted as a distress call, thus “it is a warning signal”[3].

The “World Report on Violence and Health”, published by the World Health Organization in 2002 in dealing with self-inflicted violence, which is considered to be a direct cause of injury to people and it is often the product of the same social, psychological and circumstantial factors found in other types of violence[2].

To better comprehend the phenomenon, authors point out the risk and protection factors to the occurrence of suicide[4]. From the knowledge of the risk factors it is possible to look for the prevention of the behavior, acting in what is possible to transform and to avoid; and to soften what there is no possibility of intervention. In order to prevent it, we must reinforce the protective factors and reduce the risk factors at the individual and collective levels. However, depending on the situation, culture, meaning, value and experience in which this factor affects the subjectivity, it can act as risk or as a protection[4].

The WHO has presented some recommendations: the population’s awareness about suicide and its factors; to intensify awareness and assistance programs and services; to invest in science on the subject in order to share prevention resources and actions[5]. In this way, the preventive intervention is valued, considering the complexity of the phenomenon, which triggers human suffering.

The theme of suicidal behavior in favor of mental health should be directed through welcoming attitudes and a communication channel for the individuals in their social, family and professional contexts, in order to foster feelings of hope and offer guidance[4]. The preventive aspects consist of coping with the difficulties or pathologies that lead individuals to look for a solution to their suffering, which is complex and multifaceted.

Working with suicide attempts is justified because the suicide rates have been increasing significantly, ranking as the thirteenth largest cause of death in the world and in the age group of 15 to 44, being the fourth largest cause of death[2].The phenomenon is of great relevance to public health because of its magnitude, severity in the number of deaths, hospitalizations and sequels, potential years of life that are lost, and the irreparable emotional damage caused to victims and families, causing psychic, social and economic harm. It imposes human and economic efforts on health care due to lost or reduced productivity, absenteeism, legal costs, among others[2].

In view of the above, it is necessary to organize a healthcare network that guarantees a line of integral care in the management of cases of suicide attempts, with a view to reducing morbidity and mortality and improving patients' access, as provided for the Administrative Rule No. 1,876, from August 14, 2006 - *National Guidelines for the Prevention of Suicide*. Considering the health pacts in its three dimensions: For Life, in SUS Defense and Management established by the Administrative Rule 399/GM/MS of 2006. In 2001, the *National Policy for the Reduction of Morbidity and Mortality by Accidents and Violence* was implemented. In 2006, actions to prevent violence and accidents and to promote health and peace culture were prioritized in the *National Policy for Health Promotion*.

In order to consolidate the implementation of these policies, especially in relation to epidemiological surveillance of violence and accidents, in 2006 the Health Ministry established the *Accident and Violence Surveillance System (AVSS)* for completing the *Notification form/individual investigation of domestic violence, Sexual and/or Other Types of Violence*. This form is composed of a set of variables and categories that portray the violence perpetrated against itself, against another person or against population groups. In order to do so, the description of the magnitude, the impact of the problem and the quality of the information are necessary contributions for research purposes and to identify strategies of prevention and intervention, given the social and scientific relevance. Thus, this research aims at describing the epidemiological profile of reported suicide attempts among the residents of Palmas, from 2010 to 2014.

## 2- METHODS

This is a descriptive/quantitative study with a secondary source to investigate factors associated with the occurrence of suicide attempt in individuals living in Palmas - Tocantins, from 2010 to 2014, based on information from the Notification of Injury Information System (SINAN) version 4.2.

The descriptive analysis of the data has been performed through the use of absolute and relative frequencies[6] arranged in tables. The trend of self-inflicted violence in the established period has been analyzed through the use of the chi-square test ($R^2$) for trend[7]. For data analysis, the programs *Tabwin*, SPSS 20.0, *Epi-info* and *Bioestatistic* have been used. Statistical significance has been considered when the *p* value was less than 0.05.

The project has been submitted and approved by the project evaluation and research committee of the Fundação Escola de Saúde Pública de Palmas and the ethics committee of the Centro Universitário Luterano de Palmas, the opinion number of the research ethics committee is 1,085,437 and it has been carried out in consonance with the guidelines that guide the resolution CNS nº 466 of December 12, 2012. The work has been developed in the Multiprofessional Residency in Health

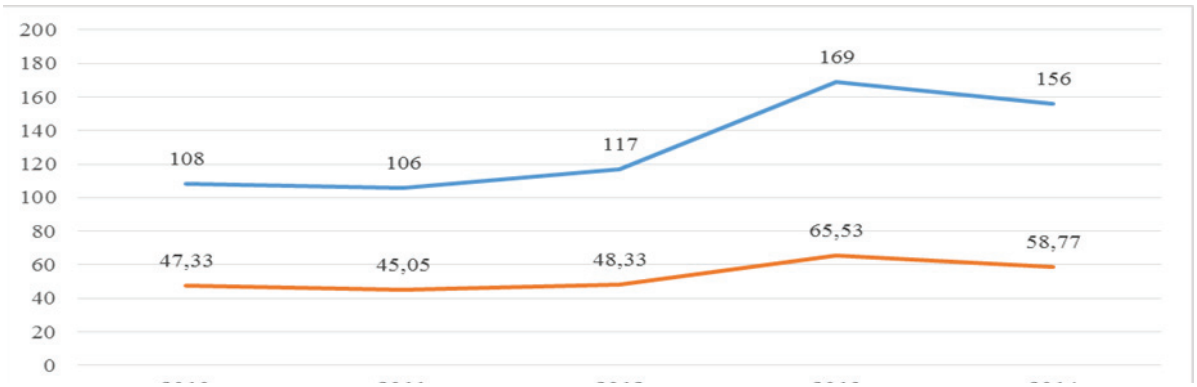
of Palmas, in the Collective Health program.

Palmas is the capital of the state of Tocantins. It was founded on May 20, 1989 and implanted on January 1, 1990. With the recent creation of the city, Palmas has been showing a high population growth that evolves according to health, education, employment, and income[8]. The estimated population in the year of 2015, according to IBGE projection, was 272,726.

**3-RESULTS**

656 cases of attempted suicide of Palmas residents, reported in the period from 2010 to 2014, have been identified in the SINAN database (Image 1). In 2011 there were 106. In 2012 there were 117. In the year of 2013, there were 169 and in 2014, 156 cases. Field 50 - (Was the injury self-inflicted?) of the Violence Notification Form has been filtered in SINAN. Field 50 refers to situations in which the person attended victimized himself/herself, attempted or committed suicide[1].

Image 1. Absolute frequency and morbidity rate of suicide attempts by Palmas-Tocantins residents from 2010-2014.




From the data that obtained *1-Yes* as a response, a search has been made for the respective variables: age; gender; race/ethnic background; schooling; occupation; marital status; disability/ disorder; frequency; means of aggression; alcohol use suspicion. Thus, 10 variables from the total of the 71 existing ones have been listed and analyzed.

Completeness is the degree of comprehensiveness of the analyzed variable, measured by the proportion of notifications with variable filled with category distinct from those indicating absence of the data[9]. Variables with a blank field or filled with "ignored" have been considered incomplete.

The socio-demographic profile is presented in Table 1, regarding gender, age, race/ethnic background, schooling, marital status, job, sexual orientation and gender identity.

Table 1 (continuous). Socio-demographic characterization of people, reported from self-inflicted violence from 2010 to 2014, Palmas residents.

| Variable | | n | % |
|---|---|---|---|
| **Gender** | Female | 440 | 67,1 |
| | Male | 216 | 32,9 |
| **Age** | 10-20 years old | 198 | 30,2 |
| | 21-30 years old | 251 | 38,3 |
| | 31-40 years old | 115 | 17,5 |
| | 41- 50 years old | 69 | 10,5 |
| | 51-60 years old | 10 | 1,5 |
| | >61 years old | 13 | 2,0 |
| **Race/Ethnic background** | White | 134 | 20,43 |
| | Black | 29 | 4,42 |
| | Asian | 29 | 4,42 |
| | Mixed-raced | 450 | 68,60 |
| | Indigenous | 2 | 0,30 |
| | Ignored | 8 | 1,22 |
| | Blank field | 4 | 0,61 |
| **Schooling** | Illiterate | 6 | 0,91 |
| | Incomplete 1st to 4th Grade – Primary Education | 21 | 3,2 |
| | Completed up to 4th Grade – Primary Education | 5 | 0,8 |
| | Incomplete 3rd to 8th Grade – Primary Education | 88 | 13,41 |
| | Full – Primary School | 39 | 5,94 |
| | Incomplete Secondary Education | 128 | 19,5 |
| | Complete Secondary Education | 154 | 23,47 |
| | Incomplete College | 38 | 5,8 |
| | Complete College | 22 | 3,35 |
| | Ignored | 30 | 4,57 |
| | Not applicable | 1 | 0,15 |
| | Blank field | 124 | 18,9 |
| **Marital Status** | Single | 353 | 53,81 |
| | Married/Consensual Union | 186 | 28,3 |
| | Widow/Widower | 2 | 0,3 |
| | Separated | 33 | 5 |
| | Not applicable | 6 | 1 |
| | Ignored | 47 | 7,17 |
| | | 29 | 4,42 |
| **Job** | Rural workers | 13 | 2 |
| | Construction Workers | 29 | 4,42 |
| | Administrative Workers | 36 | 5,5 |
| | Domestic Workers | 34 | 5,18 |

| | | | |
|---|---|---|---|
| | Housewives | 108 | 16,46 |
| | Students | 129 | 19,66 |
| | Sellers | 15 | 2,28 |
| | Retirees and Pensioners | 11 | 1,67 |
| | Others | 62 | 9,45 |
| | In blank | 219 | 33,38 |
| **Sexual Orientation** | Heterosexual | 21 | 3,2 |
| | Homosexual | 0 | 0 |
| | Bisexual | 0 | 0 |
| | Not applicable | 2 | 0,32 |
| | Ignored | 16 | 2,43 |
| | In blank | 617 | 94,05 |
| **Gender Identity** | Transvestite | 0 | 0 |
| | Transsexual Woman | 0 | 0 |
| | Transsexual Man | 0 | 0 |
| | Not applicable | 21 | 3,21 |
| | Ignored | 18 | 2,74 |
| | In blank | 617 | 94,05 |

Source: Data taken from SINAN

In the sample studied, 67.1% were female and 32.9% male. By age group, we found a greater frequency between 21-30 years old, 38.3%, followed by 10 to 20 years old, 30.2%; in the range of 31-40, 17.5%; 41-50 with 10.5%, and already with much lower percentages are the age groups over 61 years old, 2.0% and 51 to 60 years old, 1.5%.

Race/ethic background is a self-declared variable, 68.60% were declared mixed-raced, 20.43% white, 4.42% black, 4.42% Asian, 1.83% incompleteness. Schooling is concentrated in complete secondary education with 23.47%; incomplete secondary education, 19.5%; and incomplete 3rd to 8th grade of primary education, 13.41%. The marital status is 53.81% for single; 28.3% between married or in stable union; separated, 5%; widowed 0.3%; and incompleteness of 11.59%.

The job, occupation developed by the worker according to the Brazilian Classification of Occupations (BCO) has been grouped in this research. We would like to highlight the incompleteness, totaling 33.38%. The classification has been made by area: Rural Workers, Civil Construction, Administrative, Households, Housewives, Students, Sellers, Retirees and Pensioners, and Others. Regarding the occupation with greater relation to the suicide attempts in Palmas were students, 19.66%, followed by housewives, 16.46%. In this pattern, other occupations that did not fit the mentioned areas totaled 9.45%, which are the most representative in descending order: community health agents (n=7), nursing technicians (n=6), hairdressers=5) and waiters (n=4), among others. Then, administrative workers, 5.5%, whether public or private services; construction workers, mainly bricklayer and construction worker, 4.42%.

Regarding sexual orientation, 3.2% has been filled with information (heterosexual) and in the remaining 96.8% this information has been omitted. No case of self-inflicted violence in which the person has homosexual or bisexual sexual orientation has been reported. The gender identity variable presented incompleteness of 96.80%. In 3.21%, it does not apply, filled in when the gender identity refers to the same gender of the birth.

Table 2 presents disability/disorder information, as described below:

Table 2. Frequency of Disability/Disorder of people, reported from self-inflicted violence from 2010 to 2014, Palmas residents.

| Disability/Disorder | n | % |
|---|---|---|
| Yes | 154 | 23,47 |
| No | 439 | 66,92 |
| Ignored | 51 | 7,77 |
| In blank | 12 | 1,82 |

Source: Data taken from SINAN

In 23.47% some type of disability or disorder has been reported. Among these, the most frequent type of disability/disorder was Behavior Disorder 55.84%, followed by Mental Disorder 33.11%, Mental Disability 20.12%, Other Disabilities/Syndromes 6.49%, Physical Disability 3.24 %, Visual Impairment 1.29% and Hearing Impairment 0.64%. There was incompletion of 9.59%. The types of disability/disorder are filled by multiple choice. It has been identified the suspected use of alcohol in the occurrence of self-induced violence in 15.40%, without suspected alcohol use 66%, incompleteness of 18.60%. Regarding the means of aggression, it is described below in Table 3:

Table 3. Frequency of the means of aggression used, reported by self-inflicted violence from 2010 to 2014, Palmas residents.

| Means of aggression | n | % | Ignored |
|---|---|---|---|
| Body strength/beating | 9 | 1,37 | 0 |
| Hanging | 38 | 5,8 | 0 |
| Blunt object | 3 | 0,45 | 0 |
| Sharp-cutter object | 51 | 7,78 | 0 |
| Substance/Hot object | 4 | 0,61 | 0 |
| Poisoning/Intoxication | 369 | 56,33 | 1 |
| Fire gun | 2 | 0,3 | 0 |
| Threat | 4 | 0,61 | 1 |
| Other | 218 | 33,33 | 3 |

Source: Data taken from SINAN

The highest frequencies were poisoning/intoxication, 56.33%; and it includes exposure, ingestion, and inhalation of chemicals, toxic plants and medicines. Other means totaled 33.33%, used for registration of those not which are not contemplated in the other categories, such as high place precipitation. Sharp-cutter object 7.78%, it includes white weapon, glass shard, screwdriver, nail and others. Hanging represented 5.80% and other means of aggression with less representation. This variable allows multiple choice as well.

Regarding the frequency of the suicide attempt, 30.20% reported that they had already performed one or more attempts, 56.70% reported being the first attempt and 13.12% of the answers were incomplete.

## 4-DISCUSSION

A total of 656 reported cases of suicide attempts in the city of Palmas, Tocantins, from 2010 to 2014, have been analyzed in order to know the epidemiological profile of this phenomenon. Officially registered suicide attempts are in smaller numbers and less reliable than consummate suicide[10]. "It is estimated that the number of suicide attempts exceeds the number of suicides by at least ten times"[10]. For each suicide case, there are at least ten attempts of sufficient severity to require medical care and are up to 40 times more frequent than consummate suicides[11.] There are also some factors that make it difficult to identify these cases: underreporting and type of trauma that is not admitted in the health services, because they are of low degree of lethality[12]. Another factor which is associated with underreporting is the difficulty of assessing whether the occurrence was accidental or a suicidal intention[13].

In all societies, this phenomenon can be observed, although they differ from one country to another, from time to time and from the urban to the rural environment[14]. In Brazil, from 2009 to 2014 a total of 73,790 cases of self-inflicted violence were reported and there was a relative variation of 59.2%[15], which is, a significant increase over the years, reference in SINAN. In Palmas, from 2010 to 2014 there was an incidence of suicide attempts of 47.30; 45.05; 48.33; 65.53 and 58.77 per hundred thousand inhabitants, respectively, which corresponds to a growth of 15.50% and shows high values in the municipality when compared to the national numbers and other Brazilian cities. Attempts of suicide in the city occur 12.15 times more than consummate suicide.

The occurrences of suicide attempts are more frequent in females, while males are more effective in consummate suicides by the use of more lethal means of aggression. In Brazil, the highest representation was from the female gender, with 1,595 cases (63.3%) in 2009 and 14,333 (66.3%) in 2014[15]. In the emergency services in Barbacena-MG, 80% of the suicide attempts have been committed by females, during the study period[11]. Palmas follows the national and other Brazilian cities' trend regarding the higher prevalence of females in suicide attempts[8].

In Brazil, regarding the age group and the size of the population in absolute numbers, the suicide attempts are more frequent among the young. With adults, there is a closer relationship between suicide attempts and consummate suicides. In 2014, 50% of the notified attempts corresponded to the age group of 10 to 29 years old, but in 2009 and 2010 there were cases of less than 10 years old[15]. In Independência-CE the attempts were concentrated in the range of 10 to 19 years old[13]. The life events that emotionally affect the person are important factors to consider. In childhood and adolescence, sexual abuse and problems regarding the sexual orientation weigh heavily on individuals. Among young people, difficulties in the relationship with parents, with affective partners and society can be observed, and these are more influenced by the environment[13,15]. Among the elderly, it is possible to observe hypochondriac personality traits, people who are closed, shy and excessively dependent[15]. The profile of suicide attempts in Palmas-TO is more prevalent in adolescents and young adults, and less prevalent in the middle-aged and elderly population. In the city, there were also cases in children under 10 years old.

The race/ethic background variable has been divided into two categories, white and non-white, according to the characteristic phenotypes, being people black, mixed-raced, Asian, and indigenous, and being classified as non-white in this study. Contrary to what has been found in the present study, white people are the ones with the highest proportions of attempted suicide in Brazil in the period from 2009 to 2014[15]. However, the northern region has a predominant population of mixed-raced people, 71.2%; followed by white people 23.6%, and black people 4.7%[16] and it correlates with the data of this research, with a higher occurrence of the disease in the mixed-raced population (not white). It is possible to observe that there is a tendency of level of education which is inferior to eight years of schooling[8,13,17-18]. This study has had a higher education level, from nine to twelve years of schooling, when compared to the other studies.

The literature indicates a greater suicide attempt risk and risk of actual suicide in single, widowed and separated individuals[18-20], the singles converge with the profile identified in this study. The job or occupation presented high incompleteness but, from the data obtained, students and housewife have presented a higher frequency. The student occupation converges with the most prevalent age group. Although the WHO did not identify associations between suicidal

behaviors, income and unemployment in Brazil, some studies point to a positive correlation[13]. Among women, there is a predominance of students, housewives and retirees; among men, the profile of the unemployed, manual workers or in the informal sector stands out[21]. We highlight the high number of cases involving health workers, a phenomenon that should be further studied.

Sexual orientation and gender identity are the variables that obtained almost 100% of incompleteness, demonstrating that there are difficulties in answering these questions. It is necessary to carry out further studies and sensitize the professionals who responsible for the notifications about the importance of this information to guide public policies aimed at the LGBT population.

The main risk factors for suicide are: history of previous attempts and mental disorders. It is important to identify the suicide attempts and the relation with the mental disorders, in order to act preventively[10]. There is extensive study, showing that around 97% of the cases of suicide would fit a diagnosis [22]. Mental disorders and more specifically depression is more prevalent in women and has a strong association with suicide. However, it is a possible event to prevent, if diagnosed early and performed the correct treatment[4]. In national and international studies, the most commonly associated mental disorders are: neurotic disorders, stress-related disorders and somatoform; mood disorders (affective); eating disorders; schizophrenia, schizotypal and delusional disorders; mental and behavioral disorders due to the use of psychoactive substances[23]. In this study, the relation with mental disorders was 33.11%, well below the percentages found in the national literature, which presents an average of 70% and an international average of 90%. The low percentage is justified by the difficulty that professionals face to correlate this information at the time of the notification; there are no validated instruments for such; to be declared by the person or by the accompanying person at the time of notification; to involve the prejudices rooted in the society and still many times the information comes from medical records with low qualification of information.

To relate the suicide attempts with the use of alcohol and other drugs is of great importance in the proposal of the public policies for violence and its determinants. About 11.2% of the Brazilian population is dependent on alcohol, and the number of people who use it but does not reach a pattern of dependence is even greater, it has reached younger populations and it is related to other important social issues, as the risk of suicide[10]. In Brazil, in 2014, in 14.4% of the cases there was a suspicion for alcohol use[15]. During prehospital care in Arapiraca - AL in 2011, they identified that 18.7% used alcohol, being the weekend the day of the week of greatest call, with greater predisposition to the use of alcoholic beverages, an event that may favor the suicide attempt [4]. In Palmas, the result (15.40%) is close to those found in Brazil and

other cities.

Analyzing the means of aggression is important to establish prevention strategies at the level of environmental factors. In Brazil, it is more frequent the poisoning 52,9%, followed by object piercing-cutting 9% and hanging 8,4%[15]. The means of aggression is quite variable, with incidence even related to the age range; from 17 to 25 years old and in females the most used aggression means is by intoxication in a ratio of 1: 2[4], When compared to males[13]. It is more frequent, in Palmas, the ingestion of psychotropic drugs and analgesics of own consumption. There are also the use of rodenticides or pesticides that should have more restricted dispensation and prescription. Other forms of aggression totaled 33.33%, for this information many errors/ inconsistency in filling have been verified. There is a great underreporting, especially in the cases of exogenous intoxication, either by poisoning or medication[13]. In this study, the suicide attempts happened by means of less lethal aggression such as poisoning/intoxication, remembering that it predominates in females. The frequency of suicide attempts is one of the main risk factors present in the study areas[10,18,21] and it is even greater among young people[13]. The repetition of attempts has predominated among women, 75.4%[18]. In Brazil, in 2014, 28% of the people had made a previous attempt[15]. The highest risk of death from suicide in all life cycles is in the first year after an attempt, both for those who try for the first time and those who relapse, and the treatment in that period should be intensified[17,18]. Some studies have suggested that there is a small-time interval between the attempts and the consummate suicide.[13]

## 5- CONCLUSION

In this research, there is a recurrence of 30.2%, indicating the necessity of the promotion of a line of care, prevention and rehabilitation, in an integral and articulated way in the network.

Knowledge about the epidemiological profile, the risk and protection factors allows the development of promotion, prevention and intervention strategies, involving the early identification of the risk and intervention towards the phenomenon to reduce mortality.

In this research, the low qualification of the database was notorious, with incompleteness and inconsistency of some variables, suggesting the need for permanent training and sensitization of the notifying professionals regarding the epidemiological importance of the notification and filling all the variables to subsidize public policies, in addition to systematic monitoring of the quality of the database. Thus, the creation of strategies that are closer to the reality of the phenomenon.

It is important to have multiprofessional support, understanding and respect for the person and his/her family, given the suffering presented. Self-inflicted violence is a public health problem that requires investments and care by the various levels of health care. It needs to be discussed in the various sectors and social spaces, and it needs to be valued through the organization of networks processes, for the promotion of life. In addition to the epidemiological data, it is necessary to deepen and to continue the studies on this subject. The authors hope that the results and discussions of this study may guide and strengthen the public policies for the promotion, prevention and fighting of the self-inflicted violence in health and intersectoral services.

**REFERENCES**

1- Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Departamento de Análise de Situação de Saúde. Viva: instrutivo de notificação de violência doméstica, sexual e outras violências. Brasília: Ministério da Saúde; 2011.

2- Organização Mundial de Saúde (OMS). Relatório Mundial sobre violência e saúde. Editado por Etienne G. Krug, Linda L. Dahlberg, James A. Mercy, Anthony B. Zwi e Rafael Lozano. Genebra: Organização Mundial de Saúde; 2002.

3- Werlang BSG,Botega NJ e colaboradores. Comportamento suicida. Porto Alegre: Artmed; 2004.

4- Botega NJ, Werlang BSG, Cais CFS, Macedo MMK. Prevenção do comportamento suicida. PSICO. 2006 set/dez; 37(3):213-220.

5- World Health Organization (WHO). Health XXI: An introduction to the health for all policy framework for the WHO European region.European health for all series n. 5. World Health Organization Regional Office for Europe Copenhagen; 1998.

6- Vieira S. Introdução à Bioestatística. Rio de Janeiro: Campus; 1981.

7- Marôco J. Análise estatística com utilização do SPSS. 3 edição. Lisboa: Edições Sílabo; 2010.

8- Ferreira NS. Perfil epidemiológico e psicossocial de tentativas de suicídio e de suicídios em Palmas (TO) no período de 2000 a 2009 [tese]. [Brasília]: Universidade de Brasília; 2013.

9- Abath MB, Lima MLLT, Lima OS, Silva MCM, Lima MLC. Avaliação da completitude,

da consistência e da duplicidade de registros de violências do SINAN em Recife, Pernambuco, 2009-2012*. EpidemiolServSaude. 2014 jan/mar;23(1):131-142.

10- Ministério da Saúde (BR). Prevenção do Suicídio: manual dirigido a profissionais das equipes de saúde mental. Campinas: Unicamp; 2006.

11- Vidal CEL, Gontijo ED. Tentativas de suicídio e o acolhimento nos serviços de urgência: a percepção de quem tenta. Cad. Saúde Colet., 2013, Rio de Janeiro, 21 (2): 108-14

12- Grossi R, Vansan GA. Mortality by suicide in the municipal district of Maringá, PR, Brazil. J. BrasPsiq, 2002; 51 (2): 101-11.

13- Pordeus AMJ, Cavalcanti LPG, Vieira LJES, Coriolano LS, Osório MM, Ponte MSR, *et al.* Tentativas e óbitos por suicídio no município de Independência, Ceará, Brasil. Ciência & Saúde Coletiva. 2009; 14(5):1731-1740.

14- Durkheim E. O suicídio: estudo sociológico. Editorial Presença; 1987.

15- Ministério da Saúde (BR). Secretaría de Vigilancia em Salud. Departamento de Análisis de laSituación em Salud. Salud Brasil, 2014: um análisis de lamorbimortalidad por causas externas. Brasília: Ministerio de salud; 2015.

16- Instituto Brasileiro de Geografia e Estatística. Pesquisa Nacional por Amostra de Domicílios, 2009.

17- Romão NR, Vieira LJES. Tentativas suicidas por envenenamento. RBPS, 2004; 17 (1):14-24

18- Vidal CEL, Gontijo ECDM, Lima LA. Tentativas de suicídio: fatores prognósticos e estimativa do excesso de mortalidade. Cad.Saúde Pública. 2013 jan; 29(1): 175-187.

19- Souza ER, Minayo MCS, Cavalcante FG. O impacto do suicídio sobre a morbimortalidade da população de Itabira. Ciência & Saúde Coletiva. 2006; 11 Suppl: 1333-1342.

20- Volpe FM, Corrêa H, Barrero SP. Epidemiologia do suicídio. In: Correa H, Perez S, organizadores. Suicídio, uma morte evitável. São Paulo: Editora Atheneu; 2006. p. 11-27.

21- Werneck GL, Hasselmann MH, Phebo LB, Vieira DE, Gomes, VLO. Tentativas de suicídio em um hospital geral no Rio de Janeiro, Brasil. Cad. Saúde Pública, Rio de Janeiro, 2006 out;

22(10):2201-2206.

22- Bertolote JM, Fleischmann A. Suicide and psychiatric diagnosis: a worldwide perspective. World Psychiatry. 2002. 1(3): 181-185.

23- Santos AS, Lovisi G, Legay L, Abelha L. Prevalência de Transtornos mentais nas tentativas de suicídio em um hospital de emergência no Rio de Janeiro, Brasil. Cad. Saúde Pública. 2009 set; 25(9):2064-2074.

24- Magalhães APN, Alves VM, Comassetto I, Lima PC, Faro ACM, Nardi, AE. Atendimento a tentativas de suicídio por serviço de atenção pré-hospitalar. J.bras.psiquiatr. 2014 jan-mar; 63 (1): 16-22.

Article submitted on 1/30/2017

Article approved on 4/30/2017

Article posted in the system on 06/29/2107