



RESEARCH ARTICLE

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## FACTORS ASSOCIATED WITH SUICIDE ATTEMPT IN THE MUNICIPALITY OF GAMELEIRA IN PERNAMBUCO STATE, BRAZIL

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### ABSTRACT

**Objective:** To identify the social factors associated with suicide attempt in the municipality of Gameleira-PE. **Methods:** This is a quantitative study, conducted in the municipality of Gameleira-PE. Data collection used the notification form given to the Epidemiological Surveillance that composed the database. The program used for typing and retrieval of statistical calculations was the IBM SPSS in version 2.3, presenting the data as tables. **Resulted:** The results of the data crossing from the present study showed that, in the municipality of Gameleira- PE, suicide attempt prevails in females, young, low schooling and *pardo* color. **Conclusion:** The attempted suicide and death from suicide have been growing in Brazil, requiring that public bodies seek strategies for prevention of suicide, focusing on non-fatal suicide attempts as the best strategy, proposing an appropriate care and reception, providing universal access to health, psychological, social services appropriately.

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### INTRODUCTION

The word suicide etimologically derives from the Latin *sui* = oneself and *caederes* = action of killing. It was used for the first time in 1737 by Abbot Desfontaines, being incorporated,

subsequently, by the scientific community in the 19<sup>th</sup> century, in the search for psychiatric and sociological explanations for the theme (Toro *et al.*, 2013). From the epidemiological point of view, according to a study conducted by Brazil (2017a), the profile of individuals who attempt suicide, registered at the *Sistema de Informação de Agravos de Notificações* (SINAN -

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Notifications Worsening Information System), the period from 2011 to 2016 shows characteristics that vary and different preferences for self-inflicted harm, according to sex and region of the country. The indexes related to females, in the Midwest region, are 7.1%, whereas related to males, 7.4%. As for the Northeast region of the female sex had rates of 12.7% and 12.6% males, the Northern region, the female sex represented 3.9% and males, 4.2%; in the South region, the females accounted for approximately 25%, and the males, 26.2%. The Southeast region presented 51.2% of females and 49.6% of males (Brazil, 2017b).

Data indicate that the age group and sex that most attempt suicide in the country seem to be females (in all regions of the country), occurring more cases in the age range between 10 and 39 years, with 74.4% of the total number of cases. In males, the indexes of the age range from 10 to 39 years represent 74.1% of the cases (Brazil, 2017a). In relation to issues of race/color, in females, 46.6% of women who attempt suicide are white and 35.7% are black, and 19.6% had some mental disorder. In males (in relation to race/color), the indices reach 49.0% among whites and 37.2% among blacks; approximately 20.0% presented some mental disorder (Brazil, 2017b). The notifications of self-inflicted violence are inserted in the List of Notifiable Diseases of Compulsory Notification of the SINAN (since 2011), so that notifications about suicide attempts can be performed in the whole planet, and in any type of health service, whether public or private (Brazil, 2017a).

Studies have demonstrated that the suicidal individual, in some cases, seeks some kind of attention, a form of punishing another person affectively, or is simply requesting for help, i.e., a way of asking for help (Schösser, Rosa and More, 2014). Thus, numerous individual and socioeconomic factors can influence the person that attempts suicide (Vidal, Gontijo and Lima, 2013). Self-inflicted harms represent an alarming factor to achieve suicide, and prioritizing the attention to the suicidal patient can be the key point to avoid a new attempt (Botega, 2014). Thus, the anamnesis should promote the acceptance of patients and provide a professional willing to hear him/her, and, with this conversation, the suicidal person must feel supported (Oliveira *et al.*, 2016). The suicidal patient needs to have access to a team that provides a good hospital care, accepting this individual with quality aggregated for provided services (Gutierrez, 2014). In this way, it is essential to qualify better health professionals so that they can provide a more humanized and efficient care/assistance to patients (Carvalho, 2015). Therefore, the objective of this study is to identify the social factors associated with suicide attempt in the municipality of Gameleira- PE, thus being necessary to: Trace the social and attempted suicide profile and check the care network offered to patients who attempted suicide.

## MATERIALS AND METHODS

This is a descriptive, exploratory study of quantitative approach conducted in the municipality of Gameleira/PE. The research participants were patients who attempted suicide reported by the Health Department (list of SINAN) of the municipality of Gameleira/PE, being interviewed in the months of September and October of 2018. The research was performed using an instrument that characterizes the people who attempted suicide according to social, economic and attempt variables prepared by professor and advisor Eliana Lessa Lamb in her dissertation form 2016 entitled: Attempted Suicide and Psychosocial Factors. The

study included cases of attempted suicide notified by the Health Department (list of SINAN) of the municipality of Gameleira/PE in the 2016/2018 period, with age greater than or equal to 18 years. The exclusion criteria were notification records with underreporting, as well as cases of attempted suicides whose outcome was death in the visit to the household, individuals with mental disorder that hindered completing the forms and provided address different from the interviewee's residence. The application and assessment of the psychological variables were not possible due to the study population reported by the Health Department of the municipality, with only eight cases of attempted suicide in the years from 2016 to 2018. Of these, two patients refused to participate in the interview; five did not reside at the address mentioned in the notification form; and only one case agreed to participate, which will later be part of an analytical study of the case-study type. The data were analyzed descriptively using absolute frequencies and percentages and presented in tables. The program used for typing and retrieval of statistical calculations was the IBM SPSS in version 2.3. This study was approved by the Human Research Ethics Committee (CEPSH) of the University Salgado de Oliveira (UNIVERSE), respecting the ethical precepts of Resolution 466/12 of the National Health Council (CNS), through completion of the database of healthcare surveillance, before beginning the research, under opinion n. CAAE: 95345116.7.0000.5289.

## RESULTS

After receiving authorization from the Human Research Ethics Committee (CEPSH), and with the database of cases notified to the surveillance for attempted suicide in the years 2016 through 2018, the researchers started data collection. At the first moment, the cases delimited by the Family Health Strategy (FHS) were researched and, of the eight reported cases, only one datum could be collected, thus presenting the results in tables described after the analysis of the forms and database of the SINAN surveillance. Table 1 presents the social profile of patients who attempted suicide in Gameleira/PE in the years 2016 through 2018. This table highlights that: 5 patients were females; ages from 16 to 19 years, 20 to 29 years, 40 to 59 years and 50 to 59 years had frequencies that varied from one to three participants; five were of the *pardo* race/color and the others were black; they all lived in the urban area; two had incomplete elementary I, two had complete elementary I and the educational level: incomplete elementary II, elementary II, high school and college, each one corresponded to one participant in the study. Regarding the occupation, three were students, three had no information, one was retired/pensioner and one was a mechanical adjuster; the highest frequency corresponded to the married/stable union, three were unmarried and one did not have this information; only one participant was pregnant in the second trimester. The analysis of the results of the forms of attempted suicide in the municipality of Gameleira corroborates the literature, in which the highest prevalence occurs in women, people with low schooling, young individuals, *pardo* color and living in the rural area. The only difference in relation to other studies is that, in the studied municipality, the highest rates of suicide attempt occurred in married people, or in stable union, whereas the literatures presented prevalence in unmarried people. The literature does not indicate many data related to attempted suicide and pregnant women.

**Table 1. Social Profile of the Patients that Attempted Suicide in the municipality of Gameleira, Pernambuco (PE), Brazil, 2016 – 2018**

Variables	n	%
TOTAL	8	100.0
Sex		
Male	3	37.5
Female	5	62.5
Age group		
16 - 19 years	2	25.0
20 - 29 years	3	37.5
40 - 49 years	1	12.5
50 - 59 years	2	25.0
Race / color		
Black	3	37.5
Pardo	5	62.5
Residence areas		
Urbana	8	100.0
Rural	-	-
Peri-urban	-	-
Educatio		
Incomplete Elementary I	2	25.0
Elementary I	2	25.0
Incomplete Elementary II	1	12.5
Elementary II	1	12.5
High School	1	12.5
College	1	12.5
Occupation		
Student	3	37.5
Retiree/ pensioner	1	12.5
Mechanical adjuster	1	12.5
Ignored	3	37.5
Marital status		
Unmarried	3	37.5
Married/Stable union	4	50.0
Ignored	1	12.5
Pregnancy		
Second trimester	1	12.5
No	4	50.0
Not applicable (men)	3	37.5

**Table 2. Overall data of suicide attempts recorded in the municipality of Gameleira, Pernambuco (PE), Brazil, 2016 – 2018**

Variables	n	%
TOTAL	8	100.0
Month of notification		
January	2	25.0
February	2	25.0
March	1	12.5
May	1	12.5
September	2	25.0
Year of notification		
2016	1	12.5
2017	1	12.5
2018	6	75.0
Notifying unit		
Health Unit	8	100.0
Sexual orientation		
Heterosexual	1	12.5
Homosexual (Gays/Lesbians)	1	12.5
Ignored	7	75.0
Gender identity		
Not applicable	3	37.5
Ignored	5	62.5

Table 2 presents the overall data of suicide attempts recorded in the municipality Gameleira/PE in the years from 2016 to 2018, in which there were two cases in the following months: January, February and September, one in March and on in May; six cases were notified in the year 2018, one in 2016 and another in 2017; they were all reported by Health Units; sexual orientation was not recorded (ignored) for six patients, one was heterosexual and one, homosexual. For five participants, the answer for gender identity was not applicable and for the other three, there was no information. The results in Table 3 present

the Referrals of suicide attempts recorded in the municipality of Gameleira/PE in the years from 2016 to 2018, in which two patients had disorder/disability, being one with mental disorder and the other with disabilities and mental disorder; the majority (seven cases) occurred at home and one case, at the Psychosocial Care. Center (CAPS - *Centro de Atenção Psicossocial*);

**Table 3. Care network offered to the patient that attempted suicide of suicide attempts recorded in the municipality of Gameleira, Pernambuco (PE), Brazil, 2016 – 2018**

Variables	n	%
TOTAL	8	100.0
Occurrence of disorder/disability		
Yes	2	25.0
No	6	75.0
Type of disability/disorder		
Mental disorder	1	12.5
Disabilities and mental disorder	1	12.5
No mental disorder	6	75.0
Place of occurrence		
Home	7	87.5
CAPS	1	12.5
Occurrences		
Yes	2	25.0
No	6	75.0
Self-inflicted injury		
Yes	8	100.0
No	-	-
Violence motivation		
Sexism	-	-
Homophobia/Lesphobia/Transphobia	-	-
Racism	-	-
Religious intolerance	-	-
Xenophobia	-	-
Generational conflict	-	-
Street situation	-	-
Disability	-	-
Not applicable	2	25.0
Others	3	37.5
Ignored	3	37.5
Means of aggression		
Needle-sharp object	2	25.0
Poisoning	2	25.0
Electric wires	1	12.5
Medication	1	12.5
Others	2	25.0
Referrals		
Yes	6	75.0
No	1	12.5
Ignored	1	12.5
Place of referral		
Health network	5	62.5
Social work network	1	12.5
Not applicable	2	25.0
Related violence		
Yes	-	-
No	8	100.0

Two patients had already attempted suicide previously; in all cases, the lesion was self-inflicted; the motivation of violence was not answered for three participants, 37.5% had other motives other than those listed and for two, this question was ignored. Among the means of aggression, the needle-sharp objects, poisoning and other means, highlighting electrical wires and medication, with one case each. Occurrences and referrals were recorded in six patients, absent in one case and the other, ignored; in five referred cases, the place of referral was the health network and one was for the social work network. There was no related violence. The mental disorder was present in a small number of the cases notified in the municipality of Gameleira/PE, comparing to the literature that emphasizes that suicidal individuals may or may not have mental disorders, whose aim is not to end their lives, but rather

some suffering or situation experienced. The data corroborate other studies in relation to the location of occurrences, which is the individuals' homes, the means of aggression reported on the forms are the main methods of attempting suicide in all the literature found, excluding cases of hanging, which is one of the main methods used that some studies present. In this study, there stood out the use of electrical wires, not so registered in the literature.

## DISCUSSION

The suicide currently appears constantly present in society, whose presence can be observed in our daily lives, for every characterized suicide there occur from 10 to 20 times more frustrated suicide attempts, and that some individuals daily cogitate attempting suicide in their day-to-day (Peres, Nicoli and Crespo, 2016). The female population predominates in relation to suicide attempt, because they chose less harmful and fatal means to self-inflict, such as high dosage of medicines or poisoning, but men use more aggressive and fatal means (Ribeiro *et al.*, 2018). Men usually prefer means such as hanging and firearm (Thesolim, Bernadino and Ferreira, 2016). According to Brazil (2017a), the male sex has a higher rate of deaths related to suicide in relation to females. The choice of location for suicide attempt preferably is the home of the individual, assuming that there is easy access to drugs, toxins, pesticides and hanging (Ribeiro *et al.*, 2018). The highest prevalence in relation to suicide attempt is in women, young people, unemployed and with low schooling (Felix *et al.*, 2016). The high incidence of suicide among young adults is possibly linked to personal conflicts characteristic of this phase (Ferreira and Figueiredo, 2018). When some women discover pregnancy, they may experience problems such as family impact, unwanted pregnancy, changes in life style, beliefs, which can lead to the development of a depressive condition, which may result in a suicide attempt, in which this pregnant woman intends to end all the problems experienced (Krob *et al.*, 2017). According to the data provided by the Ministry of Health, suicide attempts have been growing over the years in Brazil; self-inflicted injuries are the eighth leading cause of death in females aged 15-29 years in the country. In addition, 11 thousand people take their own lives per year (Brazil, 2017b). Although the national rate referring to suicide is considered low when compared to other countries, a big warning sign is the growth in rates of suicide attempts and achieved suicide, especially among adolescents and young adults (Braga and Dell'aglio, 2013). Suicide attempt due to gender identity increased 60%, especially in cases they have suffered some type of discrimination, lesbian, gay and bisexual people may be more likely to attempt suicide and develop some mental disorder from the difficulties they face in society (Botti *et al.*, 2018). Studies have shown that the rate of suicide is growing in the country. It is possible to observe an increase of notifications of attempted suicide in the year 2018, in relation to the years 2016 and 2017, and health units also notify the cases of suicide attempt according to other literatures. Regarding the most used means for attempted suicide, poisoning or intoxication stands out, followed by needle-sharp objects, and hanging (Brazil, 2017a). The presence of personal conflicts is highly linked to impulsive suicide attempt (Ribeiro *et al.*, 2018). Some factors that lead to suicide attempt can be sexual abuse, domestic violence, interpersonal violence, accidents, significant losses, separation from parents, family conflict (Botti *et al.*, 2018). Other risk factors related to suicide attempt are stressful life events in the

past six months, low income, unemployment, severe depression problems (Felix *et al.*, 2016). Patients who have depressive symptoms are more likely to attempt suicide, in which the main symptoms are depression with sadness, hopelessness, demotivation and lack of interest for life (Felix *et al.*, 2016). The main mental disorders associated with suicide attempt are depression, bipolar disorder, and the situation worsens when there is a combination, such as depression and alcoholism (Maia, 2016).

It is important to train health professionals to be able to attend to a suicidal individual, on the relevance of completing the data of the notification form, registration of deaths from suicide, and the reception and referral necessary that professionals should provide the patient (Brazil, 2017a). In this context, the nursing professional has an important role to perform the necessary interventions to the individual who attempted suicide, providing an appropriate referral for each case, providing the patient safety and confidence, establishing a good emotional relationship. Therefore, public policies are relevant, training and monitoring health professionals in relation to adequate and complete filling of the notification forms to prevent suicide attempts (Reisdorfer *et al.*, 2015). Forms that present blank, incomplete or ignored variables hinders the construction of the epidemiological profile, and results negatively in targeting of interventions and actions that aim to minimize or even prevent the worsening and impacts of suicide in society (Medeiros, Medeiros and Silva, 2014). Regarding the limitations of the study, the number of cases of attempted suicide may be greater than the documented amount, because only one in every three people who attempt suicide is met by an emergency medical service, hindering the screening of cases. Moreover, the poor completion of the forms related to events that resulted in the suicide attempt hinders understanding which factors are contributing to the increased rate of suicide attempts (Brazil, 2017c). Nevertheless, for the advancement of scientific knowledge, studies showing which events are the major triggering factors of suicide attempts are necessary, so that there may be new forms of identifying cases and new tools for notification. Furthermore, these studies contribute to the establishment of public policies capable of reducing the rates of suicide attempt.

## Conclusion

The present study showed that the predominant profile for attempted suicide in the municipality of Gameleira/PE includes women, married, with low schooling and *pardo* color. Based on the reported cases, the patients that attempted suicide were treated at a small-sized Hospital in the municipality, where some serious cases were sent to other neighboring municipalities. When the emergency picture can be stabilized at the unit itself, the patients are referred to the Social Work network in the municipality. The main social factors that may be associated with suicide attempt in the studied territory are family conflicts, difficulties dealing with grief, financial difficulties, unemployment and loving disillusion. Studying suicide attempt in certain territory is relevant because it allows for tracing epidemiological profile through the intersection of data, so that public bodies can create strategies to prevent the suicide attempt, early identification and diagnosis of mental disorders. It is essential that public bodies and health professionals focus on suicide attempt as a major risk factor for implementation of suicide, highlighting investments in training of health professionals to meet the suicidal patient,

appropriately receiving him/her, and completing the individual forms. Therefore, there is need to adopt preventive measures to supervise the access to poisons and pesticides, the possession of weapons, to increase the disclosure about suicide, its forms, and prevention strategies showing society how suicide is present in the day-to-day, and talking about it is still the best solution.

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