

**SUICIDE ATTEMPT: SOCIO-DEMOGRAPHIC/MOTIVATIONAL DESCRIPTION OF CASE SERIES IN SANTA ROSA, GUATEMALA**

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**ABSTRACT**

**Introduction:** The objective of the article is to describe the epidemiological and motivational characteristics, as well as the levels of anxiety-depression of the cases with suicidal intent, that received attention in the Regional Hospital of Cuilapa, Santa Rosa, Guatemala.

**Methods:** Descriptive cross-sectional study. We interviewed all the people who tried to commit suicide in a period of 60 days, to identify their epidemiological and motivational characteristics, and the Hamilton test was applied for the search of levels of depression and anxiety.

**Results:** The following sociodemographic profile was detected: 58% women, 39% between 14 and 18 years old, followed by 39 to 43 years old with 16%, 45% did not profess any religion, 55% Singles, 65% working in agriculture and housewives. Seventy-one percent used poisoning as the main motive, with 84% of couples and relatives reported as the main reason. All cases showed anxiety and depression.

**Conclusion:** The sociodemographic characteristics of this study share some similarities with international references but at the same time have some particular characteristics that are important to consider in order to prevent this complex psycho-social problem. Information campaigns are required, but it's necessary a multidisciplinary team triangulated with the patient and the family in order to avoid further suicide attempts or the culmination of suicide.

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**INTRODUCTION**

The suicide attempt defined by the World Health Organization as a non-habitual act, with a non-lethal result, deliberately initiated and performed by the subject, to cause self-injury or to determine it without the intention of others, or also to cause it by ingestion of drugs in doses higher than that recognized as therapeutic<sup>1,2</sup>. It is among the first three causes of death among people aged 15-44 years<sup>3</sup> and is 10-20 times more frequent than suicide itself<sup>4</sup>. The suicide mortality coefficient (number of suicides per 100,000 inhabitants) is higher in Eastern European countries, at intermediate level are the United States, Central Australia, Japan and Central European countries; finally, the countries with the lowest coefficient are those of Central America and South America.

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That suicide attempts exceed the number of suicides, there is no national record of such attempts, and suicide attempt is a risk factor for its future concretion, raising the risk up to 100 times compared to the general population<sup>6</sup>. In Guatemala, the attempted suicide rate for 2012 was 8.7 per 100,000 people, according to the Pan American Health Organization<sup>7</sup>, with pesticide intake, hanging, and use of firearms being the most frequent forms. There are more cases of suicide in men than in women, but women try it more often than men<sup>7,8,9</sup>, with fewer fatal outcomes. Guatemala is divided into 21 departments, and the highest incidence of suicide is found in the following departments: Quiché, Huehuetenango, Escuintla, Santa Rosa, Retalhuleu, Sololá and Quetzaltenango<sup>10</sup>. According to data from the National Civil Police of Guatemala, in 2014 suicides showed the highest incidence in Santa Rosa, ranking first in the departmental level with 32 cases, of which 56% were between the ages of 12 to 25 years<sup>11</sup>. In Guatemala there is a sub-registry in relation to the suicide attempts since they are not part of the

protocols of epidemiological surveillance. This phenomenon has in itself a particular epidemiology, since it has a frequency and characteristics of complex presentation, this makes it comparable to public health problems of the nature of communicable diseases and chronic degenerative diseases. Currently in Guatemala there are no protocols for follow-up of cases and comprehensive social prevention of this disorder, as it is not considered a health problem, leaving it alone as a social problem. The study of this event is important, because the department of Santa Rosa is affected by this type of conflicts and it is placed in the first places at national level by suicides. At the Regional Hospital of Cuilapa cases of suicide attempt are attended and an increase in the number of attentions has been observed, so it was relevant to investigate as an epidemiological phenomenon but at the same time to investigate the motivational reasons related to be able to perform an intervention not only Under the biomedical view but to alert about the attention of a complex psychosocial phenomenon and to be able to give preventive measures to that level.

## MATERIALS AND METHODS

Descriptive cross-sectional study of a series of suicide-attempted cases treated at the emergency service of the Regional Hospital of Cuilapa, Santa Rosa, Guatemala, in the period of June to August of 2016. Respecting the care of the attending medical personnel and the situation of the companions, prior informed consent, the study interviews were applied in relation to general data and identification as

well as the causes that motivated the suicide attempt, in addition the Hamilton test was applied to determine depression and anxiety in each case.

## RESULTS

Thirty-one cases of suicide attempt were detected, of which 18 (58%) were women and 13 (42%) were men. In terms of age, 39% of the cases were 14 to 18 years old and 16% were between 39 and 43 years old. Related to religion 45% (14 cases) professed none while 29% were Catholic. According to the civil status 55% were single and 10 married. According to the occupation (32%) were farmers, 32% housewives and 23% students. 84% were from Santa Rosa, being the municipalities with the greatest number of cases: Barberena, Cuilapa and Nueva Santa. 52% had primary education, 26% had secondary education, and 10% (Table 1).

Among the methods used as a suicide attempt, 71% used poisoning with agrochemicals such as pesticides and herbicides, secondly drug overdose and lastly the use of a puncture weapon. As the main motive for attempting suicide, we found the couple problems as well as the family problems (Table 2).

All the people interviewed showed a degree of depression and anxiety according to the Hamilton instrument, the women had very severe depression in a greater percentage compared to the men as well as greater anxiety (graphs 1 and 2).

**Table 1** Epidemiological characteristics of people treated at the Regional Hospital of Cuilapa, Santa Rosa, by sex, June-August 2016

	Female		Male		Total	
	F	%	F	%	F	%
<b>Sex</b>						
Female	---	---	---	--	18	58.06
Male	---	---	---	--	13	41.94
<b>Age</b>						
14 - 18	9	50.00	3	23.08	12	38.71
19 - 23	3	16.67	1	7.69	4	12.90
24 - 28	1	5.57	3	23.08	4	12.90
39 - 43	1	5.57	4	30.77	5	16.13
<b>Religion</b>						
No one	7	38.89	7	53.84	14	45.16
Catholic	5	27.78	4	30.77	9	29.03
Protestant	5	27.78	2	15.38	7	22.58
<b>Civil Status</b>						
Unmarried	12	66.66	5	38.47	17	54.84
United	3	16.67	7	53.84	10	32.26
Married	3	16.67	1	7.69	4	12.90
<b>Occupation</b>						
Housewife	10	55.55	0	0.00	10	32.26
Farmer	0	0.00	10	76.92	10	32.26
Student	6	33.33	1	7.69	7	22.58
<b>Department</b>						
Santa Rosa	15	83.33	11	84.61	26	83.87
Jutiapa	2	11.11	1	7.69	3	9.68
Guatemala	1	5.55	1	7.69	2	6.45
<b>Municipality</b>						
Barberena	2	11.11	2	15.38	4	12.9
Cuilapa	4	22.22	0	0.00	4	12.9
Nueva Santa Rosa	2	11.11	2	15.38	4	12.9
<b>Scholarship</b>						
Primary	7	38.89	9	69.23	16	51.61
Basic	6	33.33	2	15.38	8	25.81
Diversified	2	11.11	1	7.69	3	9.68
Any	2	11.11	1	7.69	3	9.68

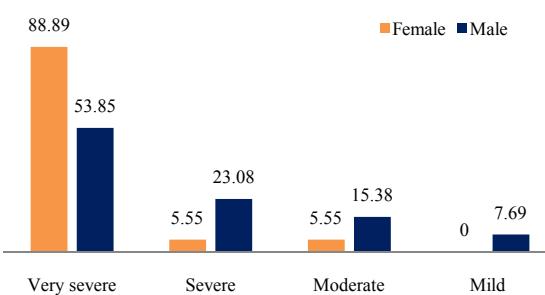
Source: Own by the authors

**Table 2** Motivational causes of people attended by attempted suicide at the Regional Hospital of Cuilapa, Santa Rosa, by sex, June-August 2016

Method Used	Female		Male		Total	
	f	%	f	%	F	%
Poisoning	11	61.11	11	84.61	22	70.97
Overdose						
Drug	6	27.77	1	7.69	6	19.35
Sharp weapon	2	11.11	0	0	2	6.45
<b>Reason for attempting</b>						
Partner problem	9	50	4	30.77	13	41.94
Family problem	7	38.88	6	46.15	13	41.94
Financial problem	0	0	2	15.38	2	6.45

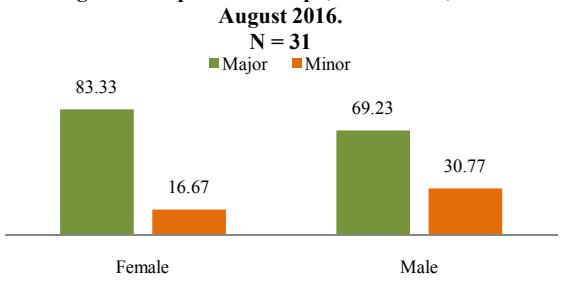
Source: Own by the authors

**Graph 1.** Degree of depression in patients who consulted for attempted suicide to the emergency of the Regional Hospital of Cuilapa Santa Rosa, by sex, June-August 2016.  
N = 31



Source: Own by the authors

**Graph 2.** Anxiety level in patients consulting for attempted suicide to the emergency of the Regional Hospital of Cuilapa, Santa Rosa, June-August 2016.  
N = 31



Source: Own by the authors

## DISCUSSION

In 2014 32 deaths from suicide were reported in Santa Rosa. In the study period, 31 cases of suicide attempt were reported in the hospital of Cuilapa, with 12 cases ending in deaths, reflecting that this problem is on the rise. 58% are women, which coincides with theoretical references that women try to commit suicide more than men<sup>1,3</sup>. The most frequent ages are 14 and 18 years, half of the women belong to this age range; In second place is the age group of 39 and 43 years with male predominance. The figures are comparable with the world's most frequent ages ranging from 15 to 29 years<sup>1</sup>.

Nearly half of the cases do not profess any religion and the other half, most of them are Catholics followed by Protestants, this differs with references that reveal suicides among the Catholic community less frequently than in Protestant people<sup>3</sup>.

In relation to marital status, singleton predominates in more than half of cases, highlighting in the female sex and it should be noted that the majority of cases were treated as minors. It has been studied that being married reduces risk significantly, so singleton is classified as a risk factor<sup>3</sup>. It is also noteworthy that a significant percentage identified as main problems the relationship with the mother which, like other studies, shows the direct relationship between family dynamics and suicidal behavior<sup>12,13</sup>.

The most common occupations were housewife for women and farmer for men, which differs from other studies which indicate that the higher a person's social level, the greater the risk of suicide<sup>14</sup>. In relation to the level of schooling, half of the cases had primary school instruction and only a quarter with secondary education. This draws attention to and remains to future investigations as to whether there was a history of poor performance at school because the latter has been related to school misconduct and to a greater suicide attempt<sup>15</sup>. The origin of the cases is based in the department of Santa Rosa in its entirety, having visited the hospital in Cuilapa for being the center of attention of the head. The municipalities with more cases, therefore with more vulnerability are Cuilapa, Barberena and Nueva Santa Rosa.

As the most used methods as a suicide attempt was poisoning with herbicides and organophosphates as the main economic activity is agriculture and these products are accessible and there is no regulation for sale, men being the most used this method and women use More drugs, which is a less traumatic but with important sequelae. Depression and anxiety were present in all cases, which has been widely studied as an important risk factor for attempted suicide or suicide in general.<sup>15</sup>

## CONCLUSION

It was observed that the suicide attempts attended in Cuilapa hospital have been presented more in: young women, single, with low schooling, without a religious identification, by family or sentimental problems, with depression and anxiety, silent, and used poisoning With agrochemicals and drug overdose. They carry a high social cost, added to the economic cost represented by the loss of young lives, expenditure of hospital supplies that are scarce and time of care employed without positive results in the event's fatality. For this reason, it is recommended that information and awareness campaigns be carried out in educational institutions, health posts and health centers about suicide, training health and education personnel to detect early signs of depression and anxiety. But above all, having a multidisciplinary team that not only cares for the patient but also the relatives in order to form a triangulation of care - prevention and care to avoid new attempts or to commit suicide.

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