

## PAPER DETAILS

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# Evaluation of Suicide Attempts in Bitlis Province: A Multicenter, Retrospective, Observational Study for 6 years period

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## Abstract

**Background:** Suicidal behavior, which is defined as ending the life of the individual voluntarily, is both a personal and social problem with its economic, cultural, social and legal aspects. The increase in suicide attempts in our country is remarkable as in all over the world. The aim of this study was to determine the risk factors by examining the time of suicide attempt and sociodemographic characteristics of the patients who admitted to the emergency departments (ED) suffered from the suicide attempt.

**Material-methods:** This retrospective, observational study included data from patients who were admitted to the ED for 6-year period between 2013-2018 years. In the study, data of the ED suicide attempt form of 7 public hospitals in the province were scanned and age, gender, marital status, educational status and month and year of suicide attempt were recorded. Data were recorded in SPSS 22.0 (Armonk, NY: IBM Corp.) programme. Categorical measurements were recorded as number and percentage, and continuous measurements were recorded as mean and standard deviation.  $p < 0.05$  was accepted as statistically significant.

**Results:** A total of 230 patients were included in the study. 32% ( $n = 76$ ) of the patients were admitted to center state hospital; 68% ( $n = 154$ ) of the patients admitted to district state hospitals. 69.5% ( $n = 160$ ) of the patients were between 16-24 years of age. 79.1% ( $n = 182$ ) of the patients were female and 65.2% ( $n = 150$ ) were single. 42.2% ( $n = 97$ ) were primary school graduates and 10.0% ( $n = 23$ ) were illiterate. The most common presentation was in 2015 with 23.9% ( $n = 55$ ). Most of the patients included in the study were admitted to hospital in June with 15% ( $n = 33$ ).

**Conclusion:** It is not always possible to pay attention to the psychosocial aspect of cases with suicide attempts in crowded ED. However, it is important to be aware of the risk factors to decrease the number of suicide attempts, that is among the most common causes of death in our country especially in the young age group, and consult with a psychiatrist.

**Key Words:** Suicide attempt; Emergency department; Demographics.

## Introduction

Suicidal behavior, which is defined as ending the life of the individual voluntarily, is both a personal and social problem with its economic, cultural, social and legal aspects<sup>1</sup>. Suicide is considered a symptom rather than an illness in recent studies<sup>2</sup>. Risk factors for suicide attempt include sociodemographic factors such as past suicide attempt, severe mental disorder, young age, female gender, low education level and unemployment<sup>3</sup>. The incidence of annual suicide attempts in adults varies between 0.3% and 2.6%. Lifetime prevalence is reported as 0.7-10%<sup>4</sup>. According to data from Turkish Statistical Institute (TURKSTAT) for 2011, the rate of suicide attempt at least 1 time throughout the life is 4.6%. However, since all suicides are not reported, the actual number is estimated to be higher<sup>5</sup>. The increase in suicide attempts in our country is remarkable as in all over the world<sup>6</sup>.

The aim of this study was to determine the risk factors by examining the time of suicide attempt and sociodemographic characteristics of the patients who admitted to the emergency departments (ED) suffered from the suicide attempt and in this wise, to contribute to practice about prevention of suicidal attempts which is a social problem, in Bitlis that is among provinces in the eastern region of Turkey.

## Material-Methods

In this retrospective, observational study, data of patients admitted to ED of the state hospitals in Bitlis province with a suicidal attempt during a 6-year period between 2013-2018 were included after the ethics committee decision of Bitlis Eren University with a number of 2018/10-III and date of 13.12.2018. All of the hospitals included in this study, which was carried out in a province with a total population

of 350.000, are state hospitals and the total number of daily ED is 2150 in whole city. Data of the ED suicide attempt form of 7 state hospitals in the province were scanned and age, gender, marital status, educational status of the patients and month and year of suicide attempt were recorded. Patients under the age of 16 and patients who were not enrolled in the hospital data system were excluded from the study.

## Statistical Analysis

Data obtained from the study were recorded in SPSS 22.0 (Armonk, NY: IBM Corp.) program. Categorical measurements were recorded as number and percentage, and continuous measurements were recorded as mean and standard deviation. The level of statistical significance was accepted as  $p < 0.05$ .

## Results

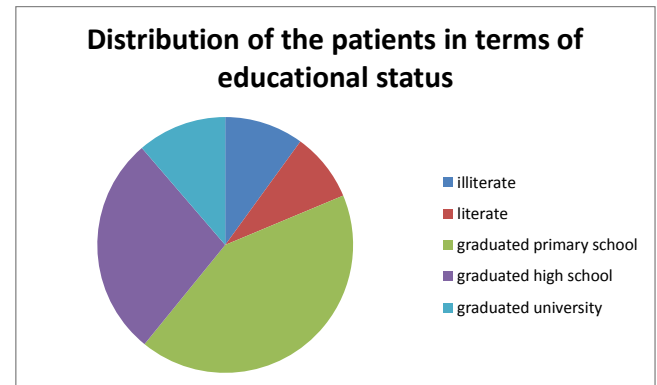
The number of patients who admitted to the ED of total 7 hospitals, including one center and 6 district state hospitals between 2013-2018, was 473. 141 of these whose data were incomplete or were not attained and 102 of these who are under age of 16 were excluded from the study. Total of 230 patients included in the study. 76 (%33,04) of the patients were admitted to center state hospital and the rest 154 (%66,96) patients were admitted to district state hospitals.

%79,1 (n=182) of the patients were female and %20,9 (n=48) were male. Female/male ratio was calculated as 3,8. %65,2 (n=150) of patients were single and %34,8 (n=80) of the patients were married. In evaluation of the distribution according to age groups, it is seen that 160 (%69,5) patients were in 16-24 of ages; 47(%20,6) patients were in 25-34 age group; 16 (%6,9) patients were in 35-49 age group; 6 (%2,6) patients were in 50-64 age group and 1 (%0,4) patient was older than 65 years (Table 1).

**Table 1.** Demographics of patients

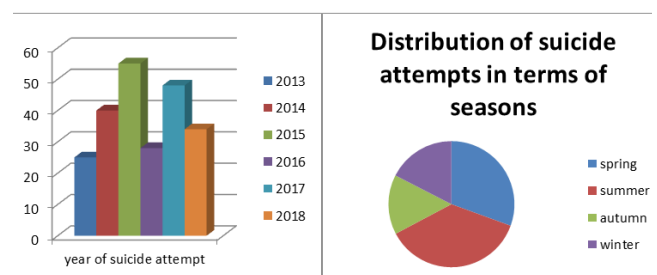
		number of patients (n)	percent (%)
Age (years)	16-24	160	69,5
	25-34	47	20,6
	35-49	16	6,9
	50-64	6	2,6
	>65 ages	1	0,4
Sex	female	182	79,1
	male	48	20,9
Marital status	married	80	34,8
	single	150	65,2
TOTAL		230	100

In terms of educational status, 97 (%42,2) patients were primary school graduates; 23 (%10) patients were illiterate; 20 (%8,7) patients were literate; 64 (%27,8) patients were high school graduates and 26 (%11,3) patients were university graduates (Figure 1).



**Figure 1.** Distribution of the patients in terms of educational status.

In the evaluation of distribution of suicide attempts over the years; the most suicidal attempts occurred in year 2015 with 55 (%23,9) patients. It is followed by 48 (%20,9) patients in 2017; 40 (%17,4) patients in 2014; 34 (%14) patients in 2018; 28 (%12,1) patients in 2016 and 25 (%10,8) patients in 2013. When the evaluating the distribution of suicidal attempts in terms of seasons, the most suicidal attempts occurred in months of summer with 84 (%37) patients and it is followed by spring (n=70), winter (n=40) and autumn (n=35), respectively. The distribution of suicidal attempts in terms of years and seasons are seen in figure 2 (Figure 2).

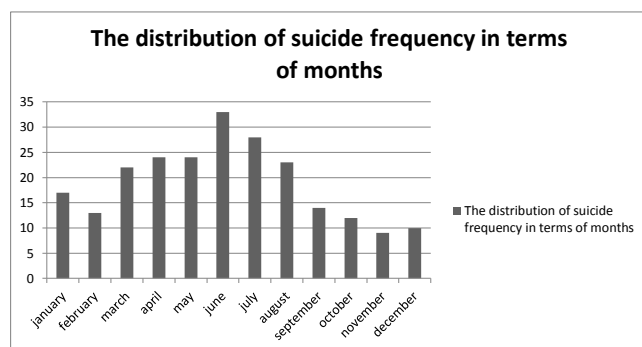


**Figure 2.** The distribution of suicide attempts in terms of years and seasons.

When evaluating the distribution of suicidal attempts in terms of months, it is concluded that most of the suicidal attempts were seen in June with a number of 33 (%15) patients. The frequency of suicidal attempts is seen in figure 3 (Figure 3).

## Discussion

In our study that is evaluated suicidal attempts retrospectively and was performed in Bitlis, is an eastern provinces of



**Figure 3.** The distribution of suicide frequency in terms of months.

Turkey, it is concluded that suicidal attempts were mostly seen in people who is female, married, between 16-24 of ages, primary school graduates and in summer. In most study performed on this issue in literature, it is pointed out that suicidal attempts are more frequently seen in female than male sex<sup>5, 7-10</sup>. Karacaoglu et al reported as the ratio of male sex attempted suicide was 26,9% and female/male ratio was 2,71<sup>11</sup>. Similarly, Cayköylü et al took attention to female dominance in suicidal attempt<sup>8</sup>. Besides suicidal attempt rates are higher in female, another point that needs to be mentioned is that suicidal attempt rates that cause death are higher in male. According to data from TURKSTAT for 2014, %74,3 of 3065 patients with suicidal attempts that caused death, were male<sup>12</sup>. In our study, in accordance with the literature, female/male ratio was 3,8. Since suicidal attempts only admitted to ED were included, in other words suicidal attempts caused death did not admitted to ED, this data may not be reflect the real. This situation is among our study limitations. Again, it is pointed out that being single increased the suicidal attempt rate in studies performed in the past. Schmidtke et al reported that being single increased the risk of suicidal attempt and even that this risk increased in single men more than single women<sup>13</sup>. Similarly Keten et al and Karacaoglu et al reported that the suicidal attempts occurs more frequently in female than male in their studies<sup>10, 11</sup>. In accordance with the literature, in our study %65,2 of the patients was single. It is thought that taking a decision with taking into account the responsibility of the family members rather than the personal after the marriage increases the resistance and decreases the frequency of suicide attempts. Nevertheless, this theory is valid for individuals without psychiatric diseases such as schizophrenia or bipolar affective disorders.

It is reported that suicidal attempts have mostly seen in under age of 30 in many studies<sup>11, 12, 14, 15</sup>. Sengül et al reported that %50 of patients with suicidal attempts were under age of 25 in their study<sup>15</sup>. Similarly Karacaoglu et al reported %51 of patients in their study and Keten et al reported that %55,7 of patients in their study were under age of 25<sup>10, 11</sup>. In accordance with the literature, in our study it has been found that %69,5 of patients attempted suicide were under age of 25.

When evaluating the suicidal attempts in terms of educational status, suicidal attempts mostly seen in primary school graduates. According to data from TURKSTAT in 2015, while 21.3% of suicidal attempts were primary school graduates in 2013, this rate was calculated as 24.9% in 2014<sup>12</sup>. The least suicidal attempts was reported in the illiterate group, which is consistent with the data of our study.

When the examining the frequency of suicidal attempts in term of months, the mostly suicidal attempts occurred in June and summer in our study. There are conflicting data in the literature on this issue. Besides the conclusions support that there are more frequent suicide attempts in months of winter and autumn, Şenol et al reported that the most frequent suicide attempt occurred in July<sup>16</sup>. In a study conducted in Sivas province, the most frequent suicide attempt was reported in November and the least in September<sup>17</sup>.

## Conclusion

In our study that is evaluated suicidal attempts retrospectively and was performed in Bitlis, is an eastern provinces of Turkey, it is concluded that suicidal attempts were mostly seen in people who is female, married, between 16-24 of ages, primary school graduates and in summer. It is not always possible to pay attention to the psychosocial aspect of cases with suicide attempts in crowded ED. However, it is important to be aware of the risk factors to decrease the number of suicide attempts, that is among the most common causes of death in our country especially in the young age group, and consult with a psychiatrist for each patient considering that the previous suicide attempt increases the risk.

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