Original Article

Evaluation of Relation between Medications and Demography of Patients Committing Suicide

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ABSTRACT

Objective: Suicide is a kind of malicious violence, with the most direct and indirect victims of it being women. Since suicide is a repetitive act, it is important to identify the abundance and types of common violence and the factors leading to it. Therefore, this study examined the season and the most commonly used drug among suicide cases referred to Sina Hospital. **Materials and Methods:** This descriptive cross-sectional study was performed on all patients who were admitted to Sina Hospital in Tabriz by suicide detection in 1395. At the beginning of the study, a checklist was designed to collect information from the patients 'files from the patients' files. The patients were asked about the age, occupation, educational level, type of drug, visitation period, previous intervention and history of psychiatric illnesses. The outcome of the study was also evaluated in this study. Finally, all information was analyzed using SPSS software version 18 and statistical methods. **Results:** This study was conducted in one from March 2016 to March 2017, and on the data of 1176 suicides. The mean age of the patients was 30.98 ± 13.03 years and 58.9% were female. 52% were single, 4.8% had a positive history of neurological diseases and 11.4% had previous suicidal experiences, 36.66% had only one occurrence of suicidal attempts. The winter with 33.1% of the most commonly visited seasons and benzodiazepines with 34.9% were the most commonly used drug among patients. Finally, 6.5% of the patients died in the hospital. **Conclusion:** The results of this study showed that benzodiazepine was the most commonly used drug for suicidal patients, and winter showed the highest suicide rate.

INTRODUCTION

Suicide is the tenth cause of death in the world, according to an estimated one million people in the world, each year commit suicide (1). 60% of suicides occur in Asian countries (2). World Health Organization describes suicide as the 25th cause of death in Mediterranean countries (1).

The frequency of suicide varies from country to country, with the highest rates in the countries known as the suicidal belt (Scandinavia, Germany, Eastern Europe, Australia and Japan), with the highest incidence of 25% and more in Spain, Italy, Ireland, the Netherlands and Egypt. 10 per cent of the people in the year have low ratings. Iran, after China and India, is the third country in which women's successful suicide rates are rising and outpacing male suicide rates (3).

According to a recent survey conducted by the Legal Medicine Research Center of the country (in 2010), the rate of suicide in Iran is 4.7 per 100,000, with 70% of suicides by men and 30% by women. In this research, the highest suspicious suicide rate in Ilam province is with 26 people per 100,000 people and the lowest rate of suicide deaths related to Hormozgan province is 2,2 people per 100,000 population (3).

Marriage significantly reduces the risk of suicide. Research shows that suicide rate in married people is 11 percent. While in single individuals it is almost twice as much, and in windows and divorces it is 24 percent and 40 percent, respectively (3).

Studies show that suicide is more common in unemployed, housewives, temporary workers, retirees, and bankrupt merchants than in other groups (3).

Over the past fifty years, suicide has increased by 60%, and this increase has been faster, especially in Third World

countries (4). This increase has made suicide a major social health problem (5). The core of suicide prevention strategies is to limit the access to deadly substances (6). This is because impulsive movements to self-harm even in a person with a low willingness to die when using methods with a high risk of death can lead to death (7,8). This is why identifying the most common suicide methods to determine appropriate strategies to limit access to the above deadly methods, as well as to improve the health system's abilities for the proper treatment of those who used these methods for suicide (9). The suited approach to many factors, including access, knowledge about the success rate of the method used, the likelihood of the death of a person, the previous experience of using the particular method, the cultural obscurantism, and the psychological state of the individual depended on that time (10).

The aim of this study was to investigate the relationship between the type of drug and the season in patients with suicidal attempt referred to the emergency department of Sina Hospital. To this end, attention will be paid to national and local authorities and ultimately lead to the adoption of necessary decisions to intervene to resolve this problem.

MATERIALS AND METHODS

This descriptive cross-sectional study was performed on all patients who were admitted to Sina Hospital in Tabriz by suicide detection in March 2016 to March 2017. At the beginning of the study, a checklist was designed to collect information from the patients 'files from the patients' files. The patients were asked about the age, occupation, educational level, type of drug, visitation period, previous intervention and history of psychiatric illnesses. The outcome of the study was also evaluated in this study. Finally, all information was analyzed using SPSS software version 15.0 and statistical methods.

Statistical Analysis

Data were collected, encoded and entered into SPSS v15.0 software. Data were then analyzed using analytical statistics. Data were analyzed using descriptive methods in the form of tables and charts.

RESULTS

In this survey, 1176 suicide attempts were evaluated.
- Age of patients:
  In the study of the age of the patients, the average age of the patients was 30.98 ± 13.03 years. The youngest patient was 13 years old and the oldest patient was 91 years old. It was also observed that 400 patients (34%) were between the ages of 40-31 (Diagram 1).
- Patients' gender:
  Among suicide-related patients, 693 patients (58.9%) were female and the other patients were male (Diagram 2).
- Marital status and occupation:
  In examining the marital status of the patients, 611 (52%) were single (Diagram 3) and 52.2% of them are Unemployed (Diagram 4).

- History of the disease:
  In examining the history of previous illnesses in patients, 295 patients (25.1%) had a previous history of the internal disease (Diagram 5).
- History of psychiatric diseases:
  The history of neurological diseases was one of the other questions asked by patients. The results showed that among patients with a history of suicide, 56 patients (4.8%) had a history of positive neurological diseases and were treated with these drugs (Diagram 6).
- Suicidal history:
  In the study of suicide history, 134 patients (11.4%) had a history of suicide (Diagram 7).
- Number of previous suicidal attempts:
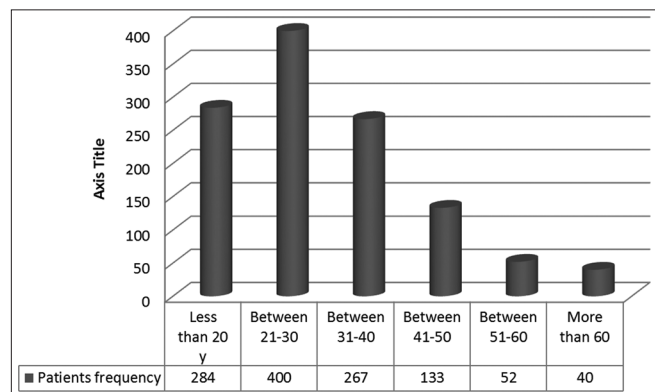 Of the patients with a history of suicide, the number of previous suicides was also asked and the results

	Less than 20 y	Between 21-30	Between 31-40	Between 41-50	Between 51-60	More than 60
Patients frequency	284	400	267	133	52	40

Diagram 1. Frequency of patients by age range
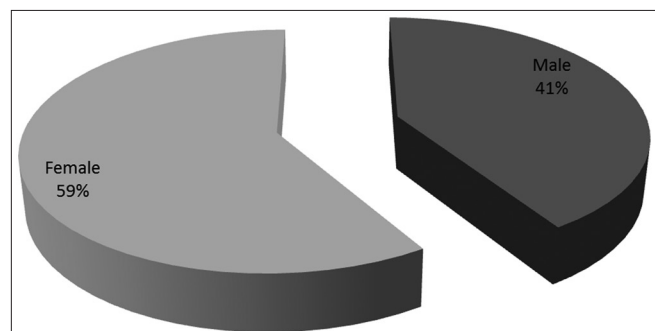
Diagram 2. Relative frequency of patients by gender

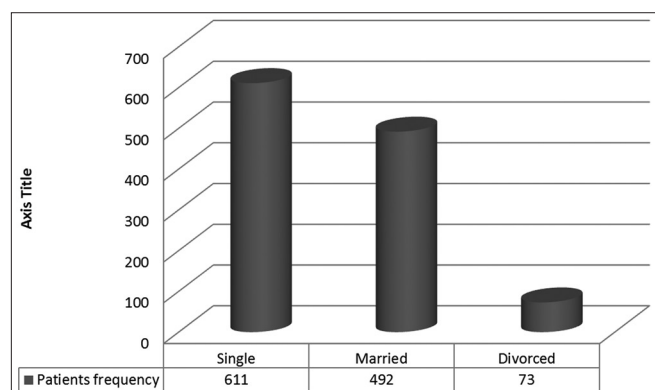|	Single	Married	Divorced
Patients frequency	611	492	73

Diagram 3. Frequency of patients by marital status

showed that 49 patients (36.56%) had only one occurrence of suicidal attempts (Diagram 8).

- Drug used:

    Another question that was extracted from patients' records was the type of drug used in patients. The results showed that benzodiazepines were the most commonly used drug among 411 patients (34.9%) (Diagram 9).

- Determine the patient's disposition in an emergency:

    Patients were assigned to the emergency department. The results showed that 964 patients (82%) of the emergency room were immediately admitted to normal areas (Diagram 10).

- Outcome of patients:

    In the case of patients, their outcomes were also evaluated. The results showed that 76 patients (6.5%) died.

- Relationship between the sex of patients with the referral season:

    In examining the relationship between the referred period of the patients and their gender, it was observed that the majority of men in the winter and women with a higher percentage of summer were referring to the emergency department, but this difference was not statistically significant.

- Relationship between the sex of patients with drug use:

    Despite the fact that in both groups, the most commonly reported drug use was benzodiazepines, but there was a significant relationship between the type of drug used and the sex of the patients.

- Relationship between the age of patients with referral season:

    In the study of patients' age and their referral season, the mean age of the patients referred to in the spring was the highest and the least patients had the average age in the autumn. However, there is no significant relationship between these two variables.
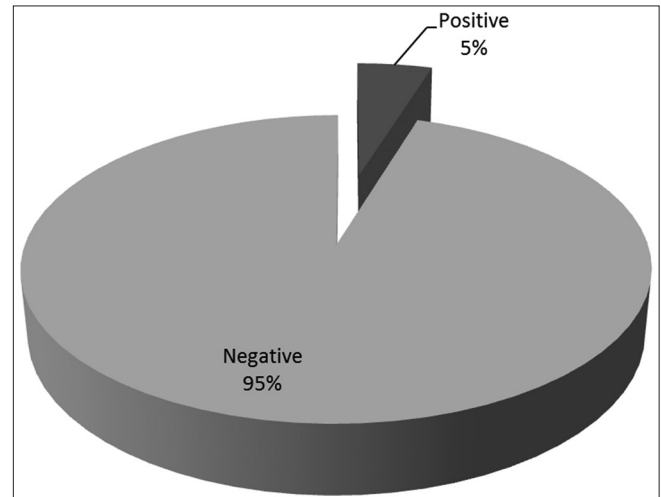

Diagram 6. The relative frequency of patients in terms of the presence of a previous psychologic disorder
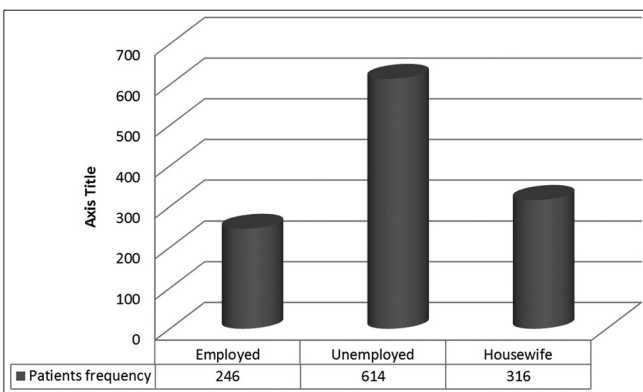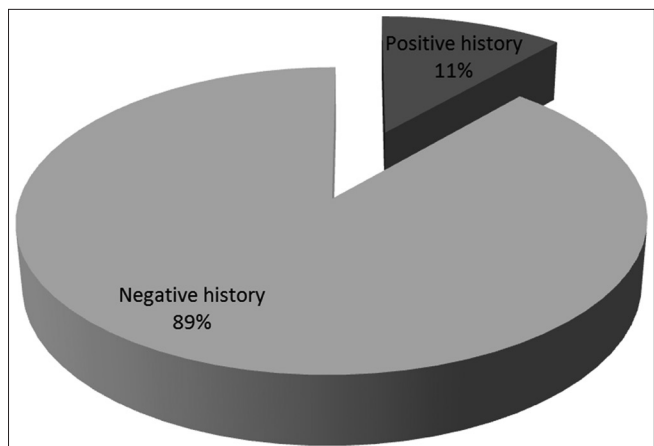

Diagram 7. Relative frequency of patients by previous suicide record

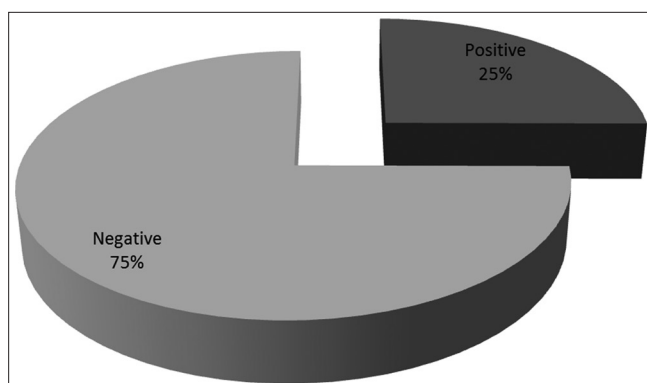**Diagram 4.** Frequency of patients by occupation of patients

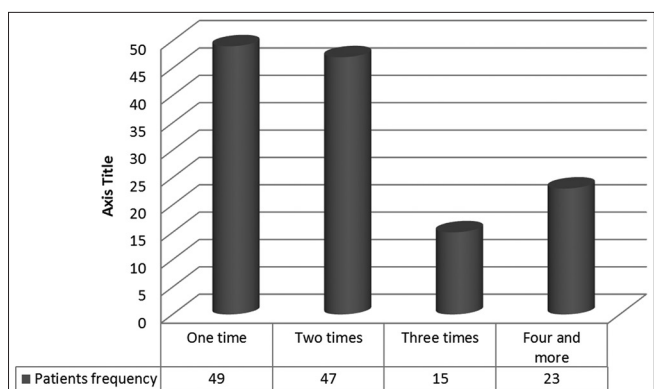**Diagram 5.** Relative frequency of patients separated from previous physical diseases

Diagram 8. Frequency of patients by the number of previous suicidal records
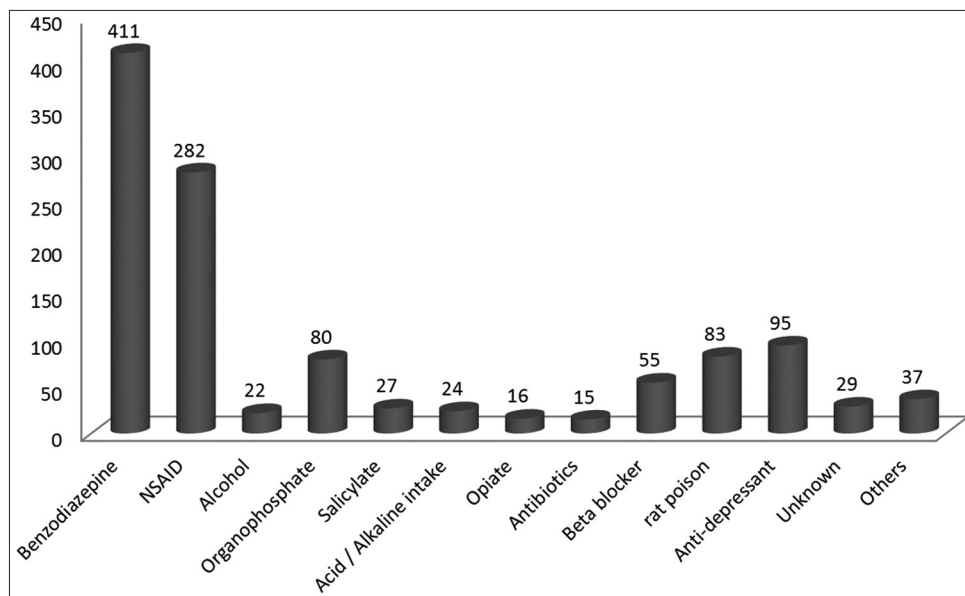
Diagram 9. Frequency of patients by type of drug

- The relationship between age of patients with the type of drug used:

  In the study of the age of the patients and the type of drug used, the highest average age was observed in the organophosphorus users and the lowest age was related to the alcohol users, and there was a significant relationship between the age of the patients and the drug.

- Relationship between the sexes of patients with their outcome:

  In examining the relationship between the sex of the patients and their outcome, it was observed that the mortality rate was significantly higher in males than in males.

- The relationship between the type of drug used and the outcome of the patient:

  In examining the relationship between the sex of the patients and their outcome, it was observed that the highest mortality rate was in the patients with acid and open and the relationship between these two variables was significant.

DISCUSSION

In this study, 1176 subjects, 58.9% were female and the mean age of the patients was 30.98 years. In the study of Shaw, the majority of cases were between the ages of 19 and 15 and the ratio of boys to girls to 2.4 (11). In the study, Mousavi et al., Had an average age of suicide attempts of 24.84 years and 60.8% of female patients (12). In the study of Architecture and colleagues that were carried out on the suicide factors of married women, it was observed that the average age of these women was 28.7 years (13). In astronomical study, 65% of patients were female and 20.7% of patients were between the ages of 20 and 24 years old with an average age of 26 years (14). In the study by Mohebbi and Bushehri from 400 patients, 55.5% were female and 44.5% were male. 52.5% of patients were between the ages of 15 and 24 (15).
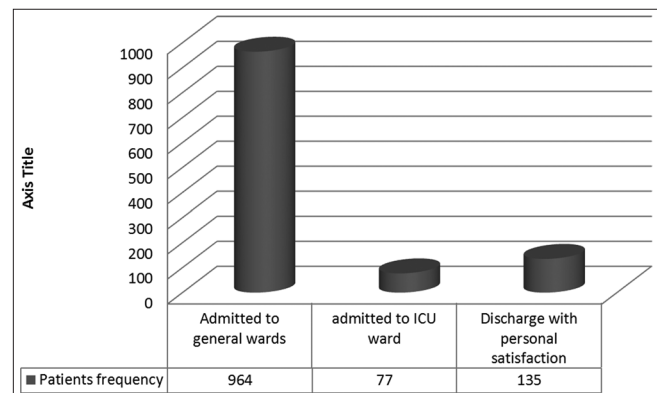

Diagram 10. Frequency of patients by their status in the emergency department

In the study of Najafi et al., 62% of the patients were female, and the present patients were 15-20 years old (mean age 17 years) (16). In a study by Chen et al., The average age of suicide attempters was 33.8 years, and the male to female ratio was 1.4:1 (17). Clark et al. Stated that the average age of suicide attempters was 37 years and 59% were male (18). In the study by Alizadeh et al., The mean age of patients was 25.23 years and 71.1% of them were women (19). In the study of studies, it can be seen that the most common age range for those committing suicide is between the ages of 30 and 21, which is an age range of young and active members of the community and, as a result, suicide them if they Along with success, it brings irreparable blow to society. On the other hand, in the studies mentioned, in some men, and in some others, women were the dominant category of the study, which is probably the cultural, social, political, and economic issues of the societies in which they were studied.

In this study, 39.8% of patients were married, the majority of housewives and 4.8% had psychiatric problems that were treated with psychiatric drugs. Also, 11.4% of patients had a history of suicide. In the study by Jangharanani et al., The rate of suicide and suicide among married people is higher

than those who have never been married (20). In the study of Mousavi and colleagues, 50% had suicide bombers and 43.8% were married (12). 57.2% of married patients, 48% had a high school education, 46% were housewives. 3.3% of the cases had a history of suicide and 30% had a history of psychiatric illness (14). In Alizadeh et al., 61.7% of single patients and 28.3% were married (19). In the study of Mohammadian et al., 70% of suicidal attempts have psychiatric disorders (21). In the study of Mohebbi and Bushehr, 80.8% of cases had committed suicide in single and inactive people (15). In the study of Najafi et al., 67% of patients had the first suicide attempt, and 20% of them had an unsuccessful one (9%) twice and 5% had three previous suicide attempts (16). In Hussey et al., The majority of patients were abusers (22). In the majority of studies, it was observed that the majority of suicidal people were married, which is a warning that married couples with family and economic problems are a major risk factor for suicide in communities, which is the study The present single people showed a higher percentage.

In this study, it was observed that medications included most of the causes of suicide attempts, and benzodiazepines were the most commonly prescribed drug among patients. In the study of Mousavi and colleagues, 79.8% of suicide attempters were the first to have no history of suicide, the drug was 84.1% the most common method of suicide (12). In the study of architecture and colleagues, pills (82.8%) were the most common method of suicide among individuals (13). In Najafi et al., The most common means of suicide was among 63% of girls and 80% of men, and chemical pesticides with 16% were the second most common cause of suicide among individuals (16). In a study by Chen et al., The most common causes of suicide was alcohol (54.55%), drug poisoning (25.25%), pesticide poisoning (5.65%) (17). In a study done by Shirazi and his colleagues in the meta-analysis in Iran, they reported that drugs are the most common method of suicide in Iran, and the most commonly used drug among patients is psychiatric drugs (23). In the study of Alizadeh et al., The most common method of suicide was 75% of drug patients and 15.5% of poisons. Among the drugs used in this study, benzodiazepines were found to be 21.1%, tramadol, and other opioids with 7.3 %, Antidepressants (4.5%), and blood pressure medications (5%) were the most commonly used drugs (24). But Afzali and colleagues in Hamadan reported that poisons and opioids were the most common method of suicidal attempt in people referred to the center (25). In the study of Hosseini et al., Drugs with 87.5% and poisons with 7.4% were the most common suicide attempt among patients, among which drugs were the most common drugs among patients (26). In his study, Mortazavi also described the most common method of suicide as benzodiazepines (27). Most studies have shown that drugs are the most common method of suicide (unsuccessful suicides) among individuals And this is because methods such as hanging loops, the use of poisons and. because of the majority of the deaths are not mentioned in the studies. Family problems are also one of the most important reasons for suicide among individuals; therefore, addressing family issues (and, to some extent, addressing the underlying issues in this regard) is very important in the community, even in order to save lives.

In the present study, the winter and later summer were the most common episodes of referral to the emergency department and attempted suicide. In the study of Hussie et al. (22), in the seasonal pattern, 26.88% of the spring, 28.1% of summer, 22.8% of autumn and 23.3% of winter were suicidal and it was observed that the summer was common The most frequent episode was the suicide attempt. Most suicide-related deaths were reported in the spring (9%) and autumn (3.8%) respectively. In the study, Hosseini et al. (26) were the most frequent season of referral of patients in spring, in spring with 29.4%, summer with 27.1%, winter with 24.6%, and autumn with 18.9%, respectively. Taziki et al. Also reported that spring was the most commonly occurring season for suicide attempts (28). In their study, Mortazavi also stated that spring and winter are the most common episodes of referral of patients to the emergency department for suicide attempt (27). In the study, it can be seen that every season, in turn, can be a common season for suicidal attempts, but the mild prevalence of spring was the most common season among these patients.

CONCLUSION

The results of this study showed that the highest dose of benzodiazepines in suicidal patients was suicide and winter showed the highest suicide rate.

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