İNTİHAR GİRİŞİMİ İLE ACİL SERVİSE BAŞVURAN HASTALARIN DEMOGRAFİK ÖZELLİKLERİNİN VE KLİNİK SONUÇLARININ DEĞERLENDİRİLMESİ

Evaluation of Demographic Characteristics and Clinical Outcomes of Patients Presenting to the Emergency Department with Suicide Attempt

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ÖZET

Amaç: İntihar, kişinin istemli olarak özbenliğine yönelmiş bir saldırganlık halidir. Her geçen gün mortalite ve morbitide oranları artan intihar vakaları önemli bir halk sağlığı sorunudur. Bu çalışmada, intihar girişimi nedeni ile başvuran hastaların demografik özellikleri, intihar girişimi yöntemlerinin değişken klinik faktörleri ile değerlendirilmesi ve sonuçlarla literatüre katkıda bulunulması amaçlanmıştır.

Gereç ve Yöntem: Bu çalışma, 01.12.2018-31.12.2018 tarihleri arasında Eğitim ve Araştırma Hastanesi Acil Tıp Kliniği'ne başvuran hastaların adli kayıtlarını ve hasta dosyalarını inceleyerek retrospektif olarak yapıldı. İstatistiksel olarak Ki-Kare ($\chi 2$) Bağımsızlık, Ki-Kare ($\chi 2$) Eğilim ve Fisher'in Exact $\chi 2$ testleri kullanılmıştır. P <0.05 istatistiksel olarak anlamlı kabul edildi.

Bulgular: Çalışmamıza toplam 504 hasta dahil edildi. Katılımcıların % 70.4'ü kadın,% 29.6'sı erkektir. Katılımcıların yaş ortalaması 30.14 dür. Eğitim düzeyi değerlendirildiğinde; % 67.7'si lise mezunu, % 22.4'ü üniversite mezunu, % 8.1'i ortaokul mezunu ve % 1.8'i ilkokul mezunu idi. Gruplar arası intihar girişimi, psikiyatrik bozukluk Glaskow koma skalası varlığında istatistiksel olarak anlamlı değildi, GKS, Klinik nihai sonuçları, intihar girişiminin aylara göre dağılımı ve intihar girişiminin zamanı istatistiksel olarak anlamlı bulundu (p = 0.000).

Sonuç: İntihar olgusu, normal yaşam beklentisinin aksine, erken ölüm nedenlerinden biri olarak hem ülkemizde hem de dünyada yüzyıllardır önemini yitirmemiş bir durumdur. Bireylerin, ilkokuldan başlayan kontrollere ek olarak, okul çağından itibaren ruh sağlığı için periyodik olarak kontrol edilmesi gerektiğini ve okul çağından başlayarak psikolojik danışmanlarla birlikte çalışarak olası intihar girişimlerinin önlenebileceğine inanıyoruz.

Anahtar kelimeler: İntihar girişimi; acil servis; psikiatrik hastalık

ABSTRACT

Objectives: Suicide is a state of aggression that is voluntarily directed towards the self. Suicide cases with increasing mortality and morbidity rates with each passing day are an important public health problem. In this study, it was aimed to evaluate the demographic characteristics, methods of suicide attempt with variable factors of clinical results of the patients who applied with the reason of suicide attempt, and to contribute to literature with the results.

Materials and Methods: This study was performed retrospectively by examining forensic records and patient files of patients who came to a Training and Research Hospital Emergency Medicine Clinic with the reason of suicide between the dates of 01.12.2018-31.12.2018. Chi-Square Independence, Chi-Square Trend, and Fisher's Exact tests were used in statistical. p <0.05 was considered statistically significant.

Results: A total of 504 patients were included in our study.Among the participants, 70.4% were female and 29.6% were male. The mean age of the participants was 30.14. Education levels were evaluated, 67.7% were high school graduates, 22.4% university graduates, 8.1% middle school graduates and 1.8% elementary school graduates. The suicide attempt months between groups was not statistically significant in the presence of psychiatric disorder Glaskow coma scale, final clinical results, distribution of suicide attempt according to months and the time of suicide attempt was found to be statistically significant (p=0.000).

Conclusion: The phenomenon of suicide is a situation that has not lost its importance on the agenda both in our country and the world for centuries as one of the causes of early death that can be prevented,unlike normal life expectancy.We believe that individuals should be, in addition to check-ups starting in primary school, periodically checked for mental health starting from school age, and that possible suicide attempts can be prevented by working together with psychological counselors starting from school age.

Keywords: Suicide attempt; emergency department; psychiatric disorders

INTRODUCTION

Suicide is a state of aggression that is voluntarily directed towards the self (1). It is the situation in which one takes refuge as a result of the conflicts within his/her soul that he/she cannot find a way out of. Suicide attempts are seen in a wide range of people within the society from those with normal mental state to severe mental disorders (1, 2). The suicidal person may take this road with a wish to die, as well as to express his/her pain, desperation and hopelessness in this behavior (1). According to data from the year 2013, World Health Organization (WHO) reports that suicide occurs every 40 seconds, has increased by 60% in the last 45 years, and is one of the top ten causes of death worldwide (3).

Although medications used in normal doses have therapeutic effects, they may, when taken in overdose in a suicide attempt, show single organ toxicity to organs such as the heart, liver, and kidney and may cause multi-organ failure. Suicide cases with increasing mortality and morbidity rates with each passing day are an important public health problem. Suicide attempts are seen nearly 40 times more than completed suicides. The most important risk factor is a past attempted suicide. (4). Therefore, it is very important to determine the people who are at risk for suicidal behavior in advance and to make necessary evaluations and interventions without losing time (5). The rates of suicide frequency vary significantly depending on variables such as country, gender, age, and how suicide is completed (6). Together with these variables, we think that individuals differ by factors from external factors to seasonal variables.

In this study, it was aimed to evaluate the demographic characteristics, methods of suicide attempt with variable factors of clinical results of the patients who applied with the reason of suicide attempt, and to contribute to literature with the results.

METHOD

This study was performed retrospectively by examining forensic records and patient files of patients who came to a Training and Research Hospital Emergency Medicine Clinic with the reason of suicide between the dates of 01.12.2018-31.12.2018. 504 individuals who attempted suicide were included in our study. Age, gender, marital status, clinical course, suicide methods, and used drug groups were recorded from the patient files. From the psychiatric consultation notes, it was recorded whether a psychiatric disorder was present before or not.

Statistical Analysis

The data obtained from the study conducted within the scope of clinical research are statistically nonparametric. Chi-Square (χ2) Independence, Chi-Square (χ2) Trend, and Fisher's Exact χ2 tests were used in statistical evaluations according to the categorical (nominal or ordinal), paired, or more than two independent groups of related variables. When the Chi-Square (χ2) hypothesis could not be met, the categories were first reduced to 3; and if the hypothesis could not be met again, Fisher's Exact (χ2) test was used. Statistical analysis was performed using the Statistical Package for Social Sciences (SPSS Inc; Chicago, IL, USA) version 20.0 software. $p < 0.05$ was considered statistically significant.

RESULTS

A total of 504 patients were included in our study. Among the participants, 70.4% (n = 355) were female and 29.6% (n = 149) were male. The mean age of the participants was 30.14 and the minimum and maximum ages were 18 and 81 years, respectively. When the patients were evaluated according to age groups, 53.4% (n = 269) was between 18-28 years, 28.8% (n = 145) was between 29-39 years, 11.9% (n = 60) was between 40-50 years, 4.2% (n = 21) was between 51-60 years, and 1.8% (n = 9) was over 61 years of age (Figure 1). With the x2 independence test and gender independent variable; there were statistically significant differences according to age groups; and suicide attempts were the most common in both women and men between the ages of 18-28 (χ2: 16.031, p = 0.03). When the presence of psychiatric disorder was evaluated in age groups, the presence of psychiatric disorder was similar in all age groups, and there was no statistically significant relationship between the groups (χ2: 0.844, p = 0.932). Glaskow coma scale was divided into 5 groups. 97.6% of the patients had GCS 15 (n = 492),

0.8% (n = 4) had GCS 14-13, 0.2% (n = 1) had GCS 12-10, %0.4(n=2) had GCS 9-6, %1 (n=5) had GCS <5 (Table 1). The time of suicide attempt, suicide month, suicide season, GCS, clinical final results, and suicide method were evaluated with age-independent variable. No statistically significant relationship was found between the time of suicide attempt, suicide month, suicide season, GCS, clinical final results, and suicide method based on age (p> 0.05).

Table 1. Demographic Characteristics for suicide attempts

| Demographic Characteristics - Independent Variables (IVs)	Name of Characteristics	Label	Number	Percent (%)	Mean	Sdt. Dev.	Scale
Gender	Female (0)	FEML	355	70.4			
	Male (1)	MALE	149	29.6			
	TOTAL		504	100			0-1
Age	TOTAL	AGE	504		30.14	0456	18-81
Marital Status	Single (1)	SG	250	49.6			
	Married (2)	MRD	211	41.9			
	Widows / widowers. (3)	WDW	43	8.3			
Education Level	University graduates.(1)	UNI	113	22.4			
	High school. (2)	HS	341	67.7			
	Middle school (3)	MS	41	8.1			
	Elementary school (4)	ES	9	1.8			
Suicide Methods	Drug in take.(1)	DI	486	96.4			
	Corrosive substance intake (2)	CSİ	12	2.4			
	İncision(3)	IN	5	1			
	By Hanging(4)	BH	1	0.2			
	TOTAL		504			1.127	1-4
Drugs Used In Suicide Attempt	Multiple Drugs (1)	PNM	146	29			
	Analgesic Drugs (2)	AND	141	28			
	Psychiatric Medication (3)	HSY	115	22.8			
	Metabolic Drugs (4)	MTM	61	12.1			
	Antibiotics (5)	ABT	54	10.7			
	Gastrointestinal Drug (6)	GID	43	8.3			
	Narcotic (7)	NCT	10	2			
	Pesticides. (8)	PSD	11	2.2			
	Allergy Medicine. (9)	ALM	23	4.6			
	Epilepsy Medicine (11)	PE	15	3			
	Iron Medicine (12)	SAK	10	2			
	Other (13)	OTHER	17	3.4			
Glaskow Coma Score	15 (1)	GCS1	492	97.6			
	13-14 (2)	GCS2	4	0.8			
	12-10 (3)	GCS3	1	0.2			
	9-6(4)	GCS4	4	0.4			
	<6 (5)	GCS5	5	1			
	TOTAL		504	100	1.06	0.454	1-5
Clinical Final Results	Exitus (1)		1	0.2			
	Healthy discharged (2)		447	88.7			
	Transfer to the service (3)		14	2.8			
	Intensive care Unit (4)		42	8.3			
	TOTAL		504	100			1-4
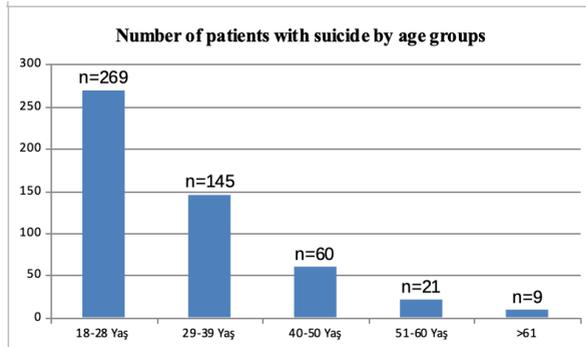
Figure 1. Number of patients with suicide by age groups
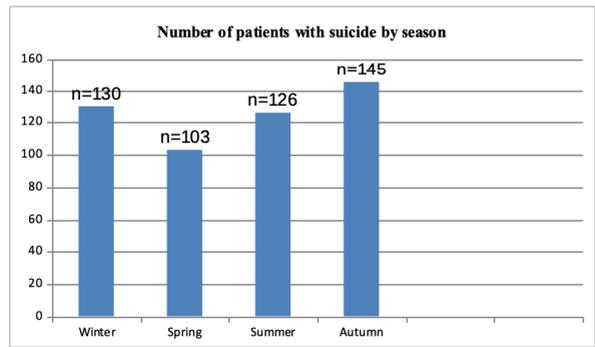

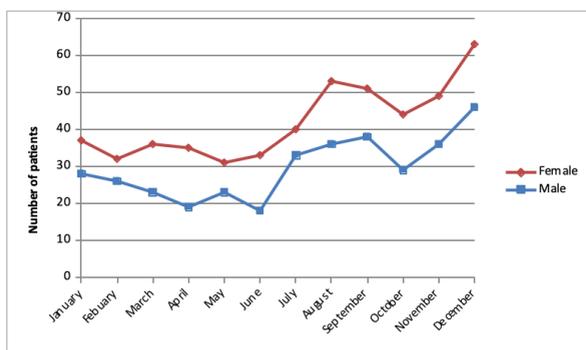**Figure 2.** Number of patients with suicide by season

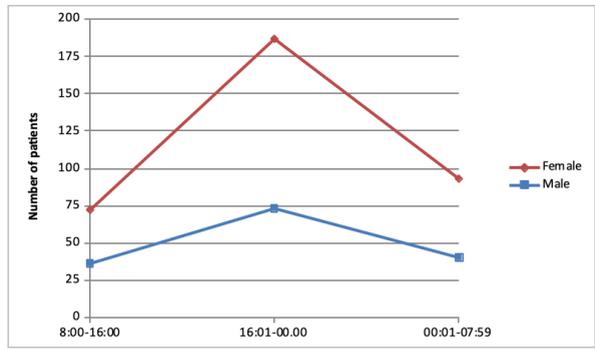**Figure 3.** Distribution Of Male And Female Patients Who Attempted Suicide By Months

Figure 4. Time distribution of men and women who attempted suicide

When the final results of the patients were evaluated, 88.7% (n = 447) of them were discharged with health, 8.3% (n = 42) were admitted to the intensive care unit, 2.8% (n = 14) were hospitalized, and 0.2% (n = 1) were not alive. When with dependent data variables of the independent variables Chi-Square (χ2) hypothesis could not be met, the categories were first reduced to 3; and if the hypothesis could not be met again, Fisher's Exact (χ2) test was used. According to this, in the clinical final results of the gender independent variable, Glasgow coma scale measurements and suicide methods were not found statistically significant (p> 0.05).

When suicide attempt was evaluated according to the seasons, 28.8% (n = 145) were seen in autumn, 25% (n = 126) in summer, 25.8% (n = 130) in winter, and 20.4% (n = 103) in spring (Figure 2). When suicide attempt was evaluated according to months, 12.5% (n = 63) was in December, 10.5% (n = 53) in August, 10.1% (n = 51) in September, and 9.7% (n = 49) in November (Figure

3). When suicide attempt hours were evaluated, 51.6% (n = 260) were evaluated between 4 pm-12 am, 26.4% (n = 133) between 12 am-8 am, and 22.0% (n = 111) between 8 am-4 pm. (Figure 4). According to the X2compliance test, the difference between the seasons was not found statistically significant (p = 0.066). With X2 independence test, the gender independent variable was not found statistically significant according to seasons, months and time of suicide in suicide attempts.(χ2: 4.182, p = 0.242; χ2: 15.835, p = 0.147; χ2: 0.731, p = 0.694).

The time of suicide attempt, suicide month, suicide season, GCS, clinical final results, and suicide method were evaluated according to the presence of psychiatric disorder. The time of suicide attempts between groups was not statistically significant in the presence of psychiatric disorder(p> 0.05). However, the time of suicide attempt was mostly found between 4 pm-12 am in both groups. The suicide attempt months between groups was not statistically

significant in the presence of psychiatric disorder (p> 0.05). In addition, the highest rate of suicide was found in September with 13.9% (n = 16) in the group with a psychiatric disorder and the highest rate of suicide was found in December with 13.1% (n = 51) in the group with no history of psychiatric disorder. There was no statistically significant relationship between the groups when suicide attempt was evaluated according to the presence of psychiatric disorder and seasons, and there was suicide attempt present in the group with a history of psychiatric disorder in the past mostly in autumn with 35.7%, and in the group without a history of psychiatric disorder in the past mostly in winter with 27.5%.

When the patients were evaluated according to their marital status, 49.6% (n = 250) were single, 41.9% (n = 211) were married, and 8.3% (43) were widows/ widowers. The time of suicide attempt, suicide month, suicide season, GCS, clinical final results, and suicide method were evaluated with the marital status variable. No statistically significant relationship was found between the time of suicide attempt, suicide month, suicide season, GCS, clinical final results, and suicide method based on marital status (p> 0.05). When education levels were evaluated, 67.7% (n = 341) were high school graduates, 22.4% (n = 113) university graduates, 8.1% (n = 41) middle school graduates, and 1.8% (n = 9) elementary school graduates. When suicide methods were evaluated, 96.4% (n = 486) attempted suicide with drug intake, 2.4% (n = 12) with corrosive substance intake, 1% (n = 5) with incision, and 0.2% (n = 1) by hanging. When the drugs used for suicide attempt were evaluated, 29% (n = 146) took multiple drugs, 28% (n = 141) analgesic drugs, 22.8 % (n = 115) psychiatric medication, 12.2% (n = 61) metabolic drugs, and 10.7% (n = 54) antibiotics, %8.5 (n=43) gastrointestinal drug, %2 (n=10) Narcotic. According to the X2 compliance test, the difference between the method of suicide attempt, Glaskow coma scale, final clinical results, distribution of suicide attempt according to months and the time of suicide attempt was found to be statistically significant (p = 0.000).

DISCUSSION
Suicide is a phenomenon that has differences in frequency and way of being seen from cultural and social aspects. This phenomenon has a characteristic of differing in terms of reaction and judgment that it creates in society and has social effects. According to the 2014 TUIK (Turkish Statistical Institute) data, suicide attempt was reported to be the highest by hanging in Turkey (8).In our study, different from this data, those who attempted suicide mostly used oral medication. Previous studies have similar results with our study; The most commonly used method in suicide attempts is drug intake, and suicide probability is higher in people who have previously attempted suicide and who come from families in which there are individuals who committed suicide (9,10). Patients with suicide attempts have different clinical pictures depending on the medication and the amount of medication they use. In a conducted study, it was reported that suicidal attempt was higher in females, whereas the completed suicide was higher in males (11). In our study, similar to other studies, suicide was higher in females, rates of clinical hospitalization in the intensive care unit were equal in both genders, and hospitalizations in services were higher in females. In the study performed by Karadakovan et al., the results of gender distribution was similar to our study (12). Different from our study and according to the 2014 TUIK data, 74.3% of those who committed suicide were male and 25.7% were female (8). In a previous study, when the age groups were evaluated in terms of suicide, the group with the highest rate was the 15-24 age group (5). Similar results were obtained in our study in terms of age groups and gender. In some studies within the literature, when the cause of suicide was questioned in this age group; they explained the suicide in the young age group as a reaction towards life or a way of avoiding problems (13,14).In addition, in another study, it was emphasized that suicide was higher in the younger age group because they were incapable of producing solutions to problems compared to other age groups (15). In a study conducted in a psychiatric clinic related to suicide, it was found to be over 50% (5) and in our study this rate was 22%. This suggests that the patients in the emergency room psychiatric consultations gave incomplete recollections because they were in an acutely developing state. Although in our study there were no statistically significant results

among seasons, months, and time of suicide attempt, suicide is most commonly seen in the autumn season. In a previous study and in contrast to our study, suicide was observed more frequently in the spring and summer periods (12, 16).

As a result of the study, the percentage of suicide attempts was found to be higher in those with low education levels. In the study of Deveci et al. and Sogut et al., the suicide rate was found to be higher in those with low education levels (17, 18). In our study and unlike these results, it was found that those who committed suicide had high education levels. In our study, the fact that 90.1% of them were high school and university graduates suggests that in suicide socioeconomic status is among the risk factors, however, that this factor is also affected by the sample diversity in the study. Suicide, an attitude towards life and death, should be considered within the scope of problem areas such as mental illnesses, social problems, violence, and accidents (13).

CONCLUSION

The phenomenon of suicide is a situation that has not lost its importance on the agenda both in our country and the world for centuries as one of the causes of early death that can be prevented, unlike normal life expectancy. The phenomenon is very common especially among youth, and is not an isolated case when considered with information from different literature; rather it is based on many variables. Due to the fact that those who committed suicide are young, there is variability in their education levels, and there is a low level of diagnosis of psychological disorder until the suicide attempt takes place, we believe that individuals should be, in addition to check-ups starting in primary school, periodically checked for mental health starting from school age, and that possible suicide attempts can be prevented by working together with psychological counselors starting from school age.

REFERENCES
1. Can SS, I. Sayıl I. Repeated Suicides. Kriz Dergisi.2004; 12 (3): 53-62.
2. Goldstein RB, Black DW, Nasrallah A et al. The prediction of suicide. Arch Gen Psychiatry.1991; 48:418-422.
3. Robbins D, Alessi NE .Depressive symptoms and suicidal behaviour in adolescents. Am J Psychiatry.1985;142:588-592.
4. World Health Organization. Programmes: mental health. Suicide prevention (SUPRE) [Internet].Geneva:WHO;2013. Availablefrom:http://www.who.int/mental_health/prevention/suicide/suicideprevent/en/ Accessed date: 23 May 2013.
5.Polat S, Çelik FGH , Koroglu A, Aslan M, Hocaoglu C. Evaluation of Cases with Attempted Suicide Admitted to a Training Hospital. Kocatepe Medical Journal.2016; 17:18-23.
6. Gulec G. Psyciatric Disorders and Suicide. Turkiye Klinikleri J Psychiatry-Special Topics 2016;9(3):21-5.
7. Karamustafalıoğlu O, Ozcelik B, Bakım B, CeylanYC, Yavuz BG, Güven T, Gönenli S. İntiharı öngörebilecek bir araç: Hastane anksiyete ve depresyon ölçeği. Düşünen Adam: Psikiyatri veNörolojik Bilimler Dergisi. 2010; 23:152-7.
8. TUIK İntihar İstatistikleri, 2014 Number: 18626 Accessed date: 19 Haziran 2015.
9. Deveci A, Taşkın EO, Dündar PE, Demet MM, Kaya E, Özmen E, Dinç G. Manisa İli Kent Merkezinde İntihar Düşüncesi ve Girişimi Yaygınlığı. Türk Psikiyatri Derg. 2005; 16:170-8.
10. Sogut O, Sayhan MB, Gökdemir MT, Kaya H, Al B, Orak M, Üstündağ M. Türkiye'nin Güneydoğusunda, Şanlıurfa ve Çevresinde Özkıyım Girişimlerinin Değerlendirilmesi. AATD. 2011;8-13.
11. Karadakovan A, Ergün S ,Bozkurt S, Çelebioğlu A ,Daşıkan Z, Sert ZE, Midilli TS An Examination of Suicide Attempts in Ödemiş District. Journal of Contınuıng Medıcal Educatıon.2016 :25 (5);181-187.
12. Lizardi D, Grunebaum MF, Burke A, Stanley B, Mann JJ, Harkavy-Friedman J, Oquendo M.The effect of social adjustment and attach-

ment style on suicidal behaviour. ActaPsychiatrScand. 2011; 124: 295-300.

13. Ducasse D, Olié E, Guillaume S, Artéro S, Courtet P. A meta-analysis of cytokines in suicidal behavior. Brain Behav. Immun 2015; 46:203-211.

14. Pandey GN. Cytokines as suicide risk biomarkers. BiolPsychiatry 2015; 78(1):5-6.

15. Brundin L, Erhardt S, Bryleva EY, Achtyes ED, Postolache TT. The role of inflammation in suicidal behaviour. Acta.Psychiatr.Scand. 2015; 132(3):192-203.

16. Ayhan MD, Dağıstan AA, Tanrıkulu CS, Bozdoğan SY ,Eren I. Increased neutrophil/lymphocyte ratio in suicide attempters.Anatolian Journal of Psychiatry 2019; 20(3):305-312.

17. Küçük E, Günel C.Demographic Characteristics of Forensic Investigation in Emergency Service.SakaryaMed J.2016;6(2):100-105.

18. May AM, Klonsky ED. What distinguishes suicide attempters from suicide ideators? A meta-analysis of potentia lfactors. Clin. Psychol. Sci. Pract.2016;23(1):1-20.