Psychiatria Danubina, 2025 Vol. 37, No. 2, pp 159-169 https://doi.org/10.24869/psyd.2025.159 *Research article*

Examination of cases admitted to the emergency department for suicide: A retrospective study of clinical outcomes

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received: 15. 11. 2024; revised: 25. 11. 2024; accepted: 13. 6. 2025

Summary

Background: *Suicidal behavior is a very complex phenomenon that includes suicidal ideation, suicide attempts, and death resulting from suicide with or without a predetermined plan. Emergency services are the principal help-seeking pathways for individuals with suicidal thoughts and behaviors. This study was conducted to examine the characteristics of cases admitted to an emergency department due to suicide in the last five years.*

Subjects and Method: *This study has a retrospective and descriptive design. The retrospective document analysis included the file data of individuals admitted to the emergency department of a university hospital for suicide attempts between January 01, 2019, and December 31, 2023. A data collection form was used to obtain data.*

Results: *The mean age of the individuals evaluated for suicide attempts in the emergency department was 32.86 ± 12.78 years. Suicide attempts occurred mostly in women (61.2%). Of the individuals who attempted suicide, 61.6% had a history of psychiatric diagnosis, 70.2% had not attempted suicide before. Of the patients, 67.1% were single, 67.1% lived with their families, and 78.8% did not have children. Of the individuals attempting suicide 23.5% had a diagnosis of depression. Suicide attempts were higher in individuals without a romantic relationship, those with a psychiatric history, those with repeated suicide attempts, and those with personal stress.*

Conclusions: *Several warning signs including behavioral warning signs such as experiencing negative interpersonal life events, alcohol abuse, suicide-related communications, and preparation of personal affairs for suicide and after death have been associated with near-term risk for suicide attempts.*

Keywords: *suicide, suicide attempts, mental health, emergency department*

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INTRODUCTION

Suicidal behavior is a very complex phenomenon that includes suicidal ideation, suicide attempts, and death resulting from suicide with or without a predetermined plan (American Psychiatric Association [APA], 2010). Suicide is an important public health problem and more than 700,000 people are reported to end their lives every year (World Health Organization [WHO], 2023). Suicide is the fourth leading cause of death among those aged 15–29. Of all suicide cases worldwide, 77% occurred in low- and middle-income countries. About 20% of suicides were committed using self-poisoning with pesticides. Other common methods of suicide are hanging and firearms (WHO, 2023). There have been 4146 suicides in Turkey, with a crude suicide rate of 4.88. The suicide rate is higher among men (3111) than women (1035) and the reasons for suicide have been classified as those caused by illness, marital conflict, challenge in making a living, failure in work, romantic relationships, failure in educational life, and other reasons. Suicide is the most common (13.7%) in the 25–29 age group and is the lowest (2.0%) in the 15-year-old and younger age group (Turkish Statistical Institute [TSI], 2023).

Nearly one-third of individuals with suicidal ideation may attempt suicide (Nock et al., 2008). More than 60% of individuals who died as a result of attempting to commit suicide consulted a physician or went to the emergency department for medical help within the month before death, 34% within the week before death, and 8.5% on the same day of death (Laanani et al., 2020). Rates of admissions to emergency departments due to suicide attempts/intentional self-harm vary between 0.6% and 1% (Baker, 2017). A study examining the causes of death in emergency departments in Europe and Turkey found that the suicide mortality rate in Europe was higher than in Turkey (13.30±1.00 and 2.64±0.50, respectively) (Boğa & Yılmaz, 2024). Among those presenting to emergency departments, the one-year suicide mortality rate of those who harmed themselves was 60 times higher than the

general population, and the suicide mortality rate of those admitted to emergency departments with suicidal ideation was 30 times higher (Goldman-Mellor et al., 2019). Therefore, when individuals present to emergency departments with an idea of suicide, this encounter should be considered as a powerful therapeutic opportunity to prevent suicide (de Santiago-Díaz et al., 2024).

Mental health clinics and emergency services are the principal help-seeking pathways for individuals with suicidal thoughts and behaviors (Miller et al., 2017). Suicides and suicide attempts are to a great extent detected by nurses and physicians in hospitals (King et al., 2017). Within multidisciplinary teams, nurses are the focus of suicide prevention guidelines due to their important role in detecting suicidal tendencies and implementing preventive and therapeutic interventions (Hagen et al., 2017). Many nurses believe that a balance should be established between safety, efficiency, and caring for patients diagnosed with mental illness (Pawaskar et al., 2022). However, the lack of self-efficacy in suicide care (Betz et al., 2018), thinking that medical needs should be prioritized before mental health needs (McGough et al., 2022), and conducting suicide risk assessments only as an act of information collection rather than as an opportunity to connect with people with suicidal thoughts and behaviors are among barriers to screening and risk assessment for suicides (Gamarra et al., 2015). Studies recommend implementing universal screening, risk assessment, and follow-up care standards in the emergency department to prevent suicide attempts (Miller et al., 2017).

Risk factors for suicide vary over the course of life (Fazel & Runeson, 2020; Plöderl, 2021). A review conducted by Ceniti et al. (2020) found that rates of admissions to the emergency department for behaviors related to suicide were associated with psychiatric history, substance use, and low socioeconomic status. The main risk factor for a suicide attempt is a previous suicide attempt. Individuals with suicidal ideation are considered an important group because most people who complete suicide have had suicidal thoughts before (McAuliffe, 2002). A systematic review examining the prevalence, correlations, and risk factors of suicidal thoughts and behaviors in Turkey reported evidence that variables such as inadequate problem-solving skills, coping strategies, hopelessness, trauma in childhood, negative life experiences, loneliness, lack of social support, family-related factors, anger, low self-esteem, substance abuse, and depression were associated with suicidal thoughts and attempts (Karkın & Eskin, 2023).

Risk assessment represents a clinical encounter in which the patient is asked about suicidal thoughts and plans (Ahmedani et al., 2014). Assessment elements include collecting information about previous suicidal behaviors, current suicidal thoughts and plans, hopelessness, stressors, presence of symptoms of mental disorders, impulsivity, self-control behaviors, access to lethal methods (such as firearms), and protective factors (Bryan, 2006). A systematic review conducted by Saunders et al. (2012) found that the risk of suicide was often underestimated in patients who harmed themselves. Risk assessment for individuals who attempted to harm themselves is necessary to help prevent further suicidal behavior and death by suicide. All healthcare professionals, regardless of their specialties, can contribute to preventing suicide attempts effectively. In addition, risk screening in the emergency department can contribute to the planning of emergency department-based interventions by identifying recent suicidal thoughts or behaviors. Accordingly, this study was conducted to examine the characteristics of cases admitted to an emergency department due to suicide in the last five years. This study is important in terms of including suicide cases before and after COVID-19 in Turkey. In this study, attempts were made to address the following questions:

1) What are the sociodemographic characteristics of suicidal patients presenting to emergency departments?
2) Do the sociodemographic and clinical characteristics of previous suicide attempters and non-suicide attempters differ?

SUBJECTS AND METHODS

Materials and design

This study has a retrospective and descriptive design. The retrospective document analysis included the file data of individuals admitted to the emergency department of a university hospital for suicide attempts between January 01, 2019, and December 31, 2023. This university hospital is located in an area of 750 m^2 and provides health services to approximately 60,000 adult patients annually. Patients admitted to the emergency department are examined by a specialist physician. Patients who need hospitalization receive care from the consultant physicians of the departments related to patients' diseases. The emergency department employs 32 health professionals daily. Mental health services are provided in outpatient and inpatient services in this university hospital.

Cases recorded with self-harm were included in the study. Data of patients with missing file information were excluded from the study. A total of 242,144 patients were provided health care services in the emergency department between January 01, 2019, and December 31, 2023.

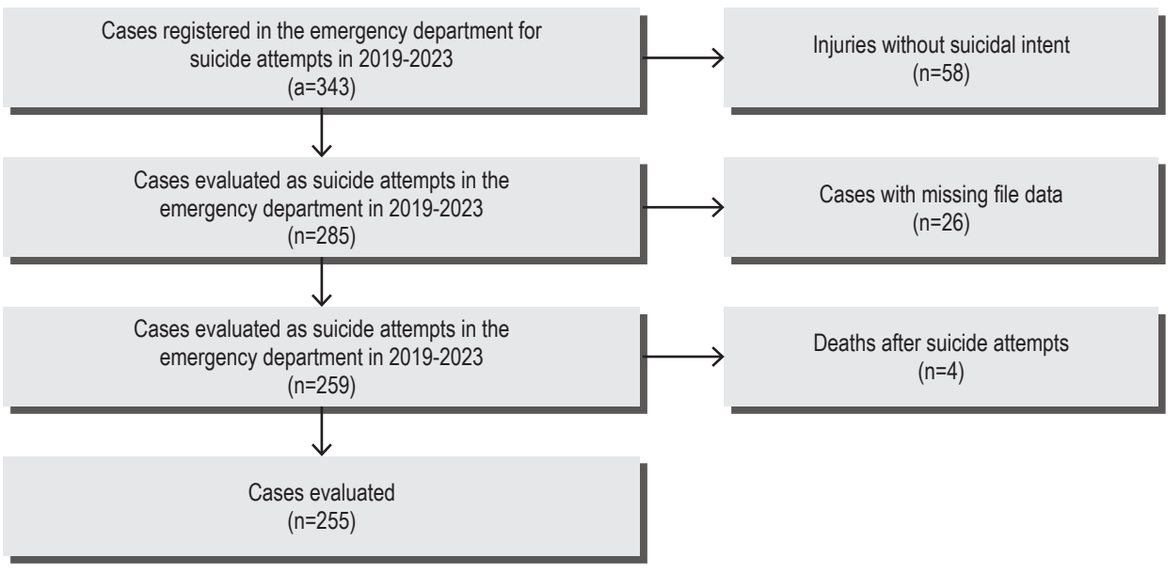

Figure 1. Study flow chart

Of these patients, 343 were admitted for suicide attempts, and a total of 255 patient records were accessed (Figure 1).

Suicide case follow-up protocol

Cases admitted to the emergency department due to suicide attempts or self-harm are evaluated by a specialist physician. The patient's history is taken from the patient or their relatives. A physical examination is performed and blood tests and radiology examinations are performed. Specialty physicians of the relevant units are consulted according to the nature of the case. Psychiatry consultation is requested in all cases of self-harm. Full monitoring is provided to prevent the patient from harming themselves and materials that can used for self-harm (cutting, piercing tools, drugs, etc.) are kept away from their environment.

During the psychiatry consultation, the physician takes the patient's history and examines their mental status. Medical treatment is administered based on the physician's assessment. The patient's active suicidal and homicidal thoughts are evaluated and a suicidal contract is made with the patient. Patients who do not have active suicidal and homicidal thoughts and who agree to make a suicide contract can be discharged. An appointment is arranged for the patient in the psychiatry unit. The patient's caregivers are given training on the prevention and follow-up for suicide attempts. When a suicide contract cannot be made with the patient, follow-up is continued by psychiatry physicians in the emergency department.

Emergency department physicians complete the suicide attempt notification form which is recorded by the emergency department secretariat as an event notification in the nucleusXC system. These forms recorded in the system are reported monthly to the Provincial Health Directorate Mental Health Unit by the statistical unit of the hospital and they are kept in the archive of the same unit. This form includes data on the sociodemographic characteristics of the people who attempted suicide, the reason, and the type of suicide attempt.

Data Collection Tools

A data collection form was developed by the researchers based on reviewing the literature. This form was used to obtain data such as the individual's age, sex, marital status, status of having children, the person(s) whom the individual lived with, the reason and type of suicide attempt, history of suicide attempts, mental status assessment, and history of psychiatric diagnosis.

The study was approved by the ethics committee of Gazi University (Date: 30.07.2024; No: 2024-1295). After receiving the approval of the ethics committee, written permission was obtained from the institution where the study would be conducted. The process of obtaining permission was completed before the study was started. This study was conducted following the Declaration of Helsinki. The principle of "Confidentiality and Protection of Privacy" and the principle of "Respect for Autonomy" were observed.

Table 1. Distribution of psychiatric emergencies according to sociodemographic characteristics

Variable	Group	n = 255	%
Age	18-24	75	29.4
	25-43	137	53.7
	44-59	29	11.4
	60-74	10	3.9
	75-90	4	1.6
Gender	Male	99	38.8
	Female	156	61.2
Marital Status	Divorced	15	5.9
	Married	56	22.0
	Single	171	67.1
	Unknown	13	5.1
Residential area	Single parent and sibling	5	2.0
	At home with their children	5	2.0
	At home with friends	11	4.3
	Student dormitory	25	9.8
	Alone at home	25	9.8
	At home with family	171	67.1
	Unknown	13	5.1
Having child	Yes	54	21.2
	No	201	78.8
Previous psychiatric diagnosis	Yes	157	61.6
	No	87	34.1
	Unknown	11	4.3
Previous suicide attempt	Yes	62	24.3
	No	179	70.2
	Unknown	14	5.5
Number of suicide attempts	1	180	70.6
	2	39	15.3
	3	9	3.5
	More than 3	10	3.9
	Unknown	17	6.7
Suicide attempts methods	Hanging	1	0.4
	Drinking alcohol/drug substance	3	1.2
	Using firearms	3	1.2
	Using chemical substances	5	2.0
	Jumping from height	9	3.5
	Using cutting tools	37	14.5
	Taking medication	197	77.3
Life threatening situation	Yes	97	38.0
	No	158	62.0
Drinking alcohol during a suicide attempt	Yes	71	27.8
	No	184	72.2
Reason for suicide attempt	Individual stressors	96	37.6
	Education challenge	2	0.8
	Alcohol/substance effect	2	0.8
	Economic problems	15	5.9
	Emotional relationship issues	17	6.7
	Stressful life events	60	23.5
	Family conflict	40	15.7
	Symptoms of psychiatric illness	92	36.1
	Unknown	27	10.6

Statistical analysis

The IBM SPSS Statistics 21.0 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) program was used for statistical analyses and calculations. The correlations between variables were summarized using descriptive statistics providing frequency and percentage values. The Fisher exact, chi-square tests were used to compare groups. The logistic regression analysis was used as a multivariate test to examine the effect on the categorical dependent variable repeated suicide attempt. The regression analysis results were presented as odds ratios (OR) with the corresponding 95% confidence intervals. A p value less than .05 was considered statistically significant.

RESULTS

The mean age of the individuals evaluated for suicide attempts in the emergency department was 32.86 ± 12.78 years. Suicide attempts occurred mostly in the age range of 25–43 (53.7%) and in women (61.2%). Of the patients, 67.1% were single, 67.1% lived with their families, and 78.8% did not have children.

Of the individuals who attempted suicide, 61.6% had a history of psychiatric diagnosis, 70.2% had not attempted suicide before, and 70.6% attempted suicide for the first time. Of the individuals, 72.2% did not drink alcohol during the suicide attempt. Taking medication for suicide attempts accounted for 77.3% of the methods for suicide. Individuals attempted suicide using psychotropic drugs they were taking for treatment. Of the individuals, 62.0% survived after the suicide attempt (Table 1).

Of the individuals attempting suicide, 34.1% did not have any psychiatric diagnosis, 23.5% had a diagnosis of depression, and 9.8% had a history of using at least one psychotropic drug (Table 2). In addition, 36.1% of the individuals attempted suicide because of symptoms of psychiatric illness (Table 1).

Table 3 shows the results of the mental status examination of the individuals evaluated in the emergency department due to suicide attempts. After the suicide attempt, 96.5% of the individuals were cooperative, 43.5% were depressed, 79.2% had insight, and 65.1% had no suicidal ideation. Of the individuals, 71.8% agreed to make a suicide contract at the evaluation before their discharge.

Table 4 shows the comparison of suicide attempts by various variables. Suicide attempts were higher in individuals without a romantic relationship, those with a psychiatric history, those with repeated suicide attempts, and

Table 2. History of psychiatric diagnosis of suicide attempters

Variable	n	%
Borderline Personality Disorder	1	0.4
Gambling Disorder	2	0.8
Alcohol Use Disorder	5	2.0
Panic attack	5	2.0
Obsessive Compulsive Disorder	3	1.2
Schizophrenia	11	4.3
Substance use	12	4.7
Anxiety Disorder	15	5.9
Bipolar Affective Disorder	18	7.1
History of psychiatric medication	25	9.8
Depression	60	23.5
Without psychiatric diagnosis	87	34.1
Unknown	11	4.3
Total	255	100.0

Table 3. The Mental Status Examination

Variable	Group	n = 255	%
Consciousness	Unconsciousness	4	1.6
	Confused	5	2.0
	Cooperate	246	96.5
Mood and affect	Depressed	111	43.5
	Euthymic	42	16.5
	Dysphoric	37	14.5
	Irritable	17	6.7
	Anxious	13	5.1
	Manic	2	0.8
	Blunted	2	0.8
	Unable to assess	31	12.2
Thought content	Active suicidal thoughts	58	22.7
	No suicidal thoughts	166	65.1
	Unable to assess	31	12.2
Insight	Yes	202	79.2
	No	4	1.6
	Partial	18	7.1
	Unable to assess	31	12.2
Suicide contract	Acceptance	183	71.8
	Rejects	39	15.3
	Unable to assess	33	12.9

Table 4. Distribution of previous suicide attempt according to various variables

Variable		Previous suicide attempt			Test result* (χ2; p)
		Yes n=62	No n=179	Unknown n=14	
Age	18-24	21 (33.9%)	54 (30.2%)	0 (0.0%)	13.30 0.06
	25-43	33 (53.2%)	94 (52.5%)	10 (71.4%)	
	44-59	4 (6.5%)	23 (12.8%)	2 (14.3%)	
	60-74	3 (4.8%)	6 (3.4%)	1 (7.1%)	
	75-90	1 (1.6%)	2 (1.1%)	1 (7.1%)	
Gender	Male	21 (33.9%)	72 (40.2%)	6 (42.9%)	0.88 0.63
	Female	41(66.1%)	107 (59.8%)	8 (57.1%)	
Marital Status	Divorced	4 (6.5%)	9 (5.0%)	2 (14.3%)	42.31 0.00
	Married	11 (17.7%)	45 (25.1%)	0 (0.0%)	
	Single	47 (75.8%)	120 (67.0%)	4 (28.6%)	
	Unknown	0 (0.0%)	5 (2.8%)	8 (57.1%)	
Having child	Yes	15 (24.2%)	39 (21.8%)	0 (0.0%)	4.13 0.12
	No	47 (75.8%)	140 (78.2%)	14 (100.0%)	
Previous psychiatric diagnosis	Yes	53 (85.5%)	101 (56.4%)	3 (21.4%)	48.96 0.00
	No	9 (14.5%)	74 (41.3%)	4 (28.6%)	
	Unknown	0 (0.0%)	4 (2.2%)	7 (50.0%)	
Number of suicide attempts	First time	2 (3.2%)	178 (99.4%)	0 (0.0%)	327.48 0.00
	Repeated	58 (93.5%)	0 (0.0%)	0 (0.0%)	
	Unknown	2 (3.2%)	1 (0.6%)	14 (100.0%)	
Reason for suicide attempt	Family conflict	8 (20.0%)	32 (80.0%)	0 (0.0%)	110.44 0.00
	Symptoms of psychiatric illness	26 (28.3%)	65 (70.7%)	1 (1.1%)	
	Individual stressors	28 (29.2%)	68 (70.8%)	0 (0.0%)	
	Unknown	0 (0.0%)	14 (51.9%)	13 (48.1)	

*The Fisher's exact test, significance level: $p < 0.05$.

Table 5. Results of multivariable logistic regression analysis of previous suicide attempt

Parameters		OR	95% Cl	p-value
Gender	Female	0.00	1.34-4.10	0.81
	Male	-		
Marital Status	Single	0.01	2.61-2.98	0.98
	Married	0.00	5.59-6.48	
	Unknown	-		
Having child	No	2.37	0.10-52.52	0.58
	Yes	-		
Previous psychiatric diagnosis	Yes	0.01	1.86-7.23	0.98
	No	0.00	3.43-1.33	
	Unknown	-		

OR: odds ratio; CI: 95% confidence interval. $p < 0.05$.

those with personal stress ($p < 0.05$). Suicide attempts were higher in women, in those in the 25–43 age range, and in those without children; however, this difference was not significant ($p > 0.05$). The results of multivariate logistic regression analysis conducted to predict the risk of repeated suicide attempts revealed that sex, marital status, having children, and history of psychiatric diagnosis did not predict repeated suicide attempts.

DISCUSSION

This study examined the characteristics of cases admitted to an emergency department due to suicide. Within this context, the individuals' age, sex, marital status, history of psychiatric diagnosis, history of suicide attempt, reason for suicide, and method of suicide attempt were analyzed in terms of factors affecting suicide risk.

Based on the study results, suicide attempts occurred mostly in the age range of 25–43 years, in women, single, and childless individuals. Similar studies conducted in different regions of Turkey reported that those who visited the emergency department due to suicide were in the 25–43 age range (Ata et al., 2021; Ercan et al., 2016), women (Elisei et al., 2012; Atli et al., 2014; Mete et al., 2020; Sahin et al., 2021), and single individuals (Ercan et al., 2016; Mete et al., 2020). A review conducted by Ceniti et al. (2020) found that cases of suicide admitted to the emergency department were higher in the age range of 15–24 years, women, and those who lived alone. Goldman-Mellor et al. (2019) found that individuals who visited an emergency department in California between 2009 and 2011 due to suicide attempts were higher in the 25–44 age range and in women.

Loneliness is associated with suicidal thoughts and behaviors (Muyan & Chang, 2015). The demographic profiles of suicide deaths and suicide attempts are often reported to be very different. Suicide rates are generally higher among men and increase with age; however, suicide attempts are more likely to occur among women and young people (Conner et al., 2019; Lee et al., 2014). In addition, the way of seeking help varies as the suicide risk level changes, and women, middle-aged people, and people living in urban areas are more likely to seek or access help as the level of suicidality increases (Tang et al., 2022).

The present study found that more than half of the individuals who attempted suicide had a history of psychiatric diagnosis and the rate of depression diagnosis was the highest. Additionally, the mental status examination performed after the suicide attempt revealed that the individuals were in a depressed mood. Studies have reported that three-quarters of suicide attempts are carried out by individuals with a history of mental disorders (Rahme et al., 2016). A major depression diagnosis is a suicide risk factor in individuals admitted to the emergency department (Cerel et al., 2016; Probert-Lindström et al., 2020; Sahraian et al., 2023). The study conducted by Christensen et al. (2021) found that the intensity of depression symptoms was associated with suicidal ideation. Individuals with high depression symptoms may show suicidal behavior as part of a depressive episode (Draper, 2014). Psychiatric diagnostic patterns and related comorbidities may be critical factors that should be considered in the context of preventing suicide attempts. These factors may interact with other risk factors such as impulsivity and depression symptoms and impact the outcomes of suicidal behavior (Bernanke et al., 2017).

Based on the results of the present study, more than half of the individuals who attempted suicide had not attempted suicide before and suicide attempts were higher in those with repeated suicidal behavior. History of previous suicide attempts stands out as the most important risk factor for completed suicide (WHO, 2014). Having a history of suicide attempts is a suicide risk factor in individuals admitted to the emergency department (Probert-Lindström et al., 2020). In the study by Ridout et al. (2021), individuals admitted to the emergency department due to suicide attempts had a mental health or suicide diagnosis in the last two years. Almost half of the individuals who died as a result of suicide were admitted to an emergency department at least once in the previous year (Ahmedani et al., 2014; Ata et al., 2021). Follow-up of individuals who come to the emergency department due to suicide attempts after their discharge has a crucial role in preventing suicide attempts because mortality is higher in the years following a suicide attempt or intentional self-harm, especially in deaths caused by suicide (Parra-Uribe et al., 2017). Accurately identifying individuals at high risk for recurrent suicidal ideation can enable health professionals to focus limited time and resources on high-risk individuals.

Beautrais (2003) found that the 5-year mortality rate was five times higher in people who received comprehensive inpatient treatment after attempting suicide. Suicide attempts conducted using lethal methods predict subsequent completed suicide (Olfson et al., 2017). The majority of the individuals attempted suicide using psychotropic drugs that they used for treatment in the present study. Similar studies found that individuals admitted to the emergency department because of suicide attempts took drugs to commit suicide (Ata et al., 2021; Kodik & Ozdemir, 2021; Tatlı et al., 2020). Sahraian et al. (2023) found that the use of medical drugs was the most common self-poisoning method. Additionally, self-harm was the last method used by one-third of people who died as a result of suicide (Bergen et al., 2012). The main goal of interventions to prevent suicide is to limit access to tools used in suicide.

Most suicides occur impulsively in moments of crisis when the ability to cope with life stressors is impaired (WHO, 2023). The present study found that most of the individuals who attempted suicide did so due to individual stressors. The causes of deaths due to suicide in Turkey

have been recorded as illness (26.4%), family incompatibility (4.6%), economic problems (6.8%), business failure (0.2%), emotional relationships (2.7%), educational failure (0.1%), other (31.3%), and unknown (27.9%) (TSI, 2024). Ercan et al. (2016) found that marital conflict was among the stress factors leading to suicide attempts.

According to the results of the study conducted by Aktaş et al. (2022), women attempted suicide because of family problems and men attempted suicide because of psychiatric reasons. A study in which Karkın and Keskin (2023) systematically reviewed the prevalence, correlations, and risk factors of suicidal thoughts and behaviors in Turkey found evidence that inadequate problem-solving skills and coping strategies were associated with suicidal thoughts and attempts. In a meta-analysis study, Howarth et al. (2020) reported that stressful life events were associated with suicidal ideation and suicidal behavior. Additionally, experiencing stressful life events had the potential to increase the risk of suicidal ideation when stressful life events were experienced within the last year.

CONCLUSIONS

People who attempt suicide need multidisciplinary psychiatric and somatic management in the acute phase and specialized care in the functional rehabilitation phase (Dekker et al., 2020). Several warning signs including behavioral warning signs such as experiencing negative interpersonal life events, alcohol abuse, suicide-related communications, and preparation of personal affairs for suicide and after death have been associated with near-term risk for suicide attempts. Identifying behavioral warning signs is of particular interest to clinicians, family, and friends of a person at risk because these signs are observable (Zalar et al., 2018; Bagge et al., 2023). Best practice recommendations from emergency departments are that every individual who screens positive for suicide risk should be assessed by a mental health provider (Capoccia & Labre, 2015). Emergency department guidelines suggest contacting the patient's family or friends for "collateral" confirmation of suicide risk assessment and safety planning (Betz & Boudreaux, 2016). Understanding risk factors for suicide attempts helps to determine vulnerable patients. Identifying the factors that increase the risk of suicidal ideation and behavior, particularly those attributable to environments and circumstances beyond the person's control, can help relevant people obtain information on psychological risk assessments and interventions. Suicide risk is multifactorial and complex interactions between different factors are likely to occur. Suicide risk is unlikely to remain constant over time and should be assessed at repeated intervals throughout an individual's life.

LIMITATIONS

This study had some limitations, the most important of which was being unable to access all the data. This was a retrospective study; thus, the data were collected from hospital records but all the data of some patients could not be accessed. The sample size decreased because these cases could not be included in the study. Another limitation of the study was the information obtained from the evaluation form. Although standardized forms had been used in patient assessment, some basic sociodemographic data could not be obtained. Data such as the patient's education level, socioeconomic level, and previous emergency department admissions were not available in the files. No follow-up data were obtained because there was no follow-up system after discharge. Finally, the study used the data obtained from a single center in a certain time interval, thus the results cannot be generalized.

Ethical Considerations: Does this study include human subjects? YES

Conflict of interest: No conflict of interest

Data Availability Statement: Data will be made available on request

Acknowledgments: None

Funding sources: The authors received no funding from an external source

Authors Contributions: RE: design of the study, literature searches and analyses, statistical analyses, interpretation of data, manuscript writing, approval of the final version. NS: literature searches and analyses, data collection, manuscript writing, approval of the final version. AD: interpretation of data, manuscript writing, approval of the final version

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