Chron Precis Med Res 2023; 4(3): 361-365
DOI: 10.5281/zenodo.10020880

ORIGINAL ARTICLE
ORİJİNAL ARAŞTIRMA

Evaluation of Children and Adolescents Admitted to Emergency Service with Suicide Attempt

Çocuk Acil Servise İntihar Girişimi ile Başvuran Çocuk ve Ergenlerin Değerlendirilmesi

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ABSTRACT

Aim: Suicide attempts in children and adolescents are an increasing public health problem. In this study, we aimed to examine the characteristics of children and adolescents who presented to the pediatric emergency department with suicide attempt in detail.

Material and Method: This study was conducted by retrospectively analyzing the files of children aged 0-18 years who were admitted to the Pediatric Emergency Department of Ümraniye Training and Research Hospital between January 2018 and December 2022 due to suicide attempt.

Results: Of the 282 cases included in the study, 227 (80.5%) were girls and 55 (19.5%) were boys. The most common method was drug overdose (94.6%) followed by incision (1.7%). 85 patients had a history of psychiatric drug use, and 53 of them attempted suicide by taking the drug they used. The most common reason for suicide attempts is family conflict, accounting for 49.2%. The most common psychiatric diagnosis was major depressive disorder (42.9%). 105 (37%) children who completed emergency department treatment were consulted with child-adolescent psychiatrists and 12 (4.3%) children were referred to the psychiatric service.

Conclusion: When evaluating patients who present with a suicide attempt, it is thought that knowing the characteristics of the attempt may be useful in the course of treatment and in increasing the effectiveness of preventive health services.

Keywords: Suicide attempt, child, adolescent, psychiatry, pediatric emergency.

ÖZ

Amaç: Çocuk ve ergenlerde intihar girişimi artarak giden bir halk sağlığı sorunu olarak karşımıza çıkmaktadır. Bu çalışmada; çocuk acil servisine intihar girişimi ile başvuran çocuk ve ergenlerin özelliklerinin ayrıntılı incelenmesi amaçlanmıştır.

Gereç ve Yöntem: Bu çalışma, Ocak 2018-Aralık 2022 tarihleri arasında Ümraniye Eğitim ve Araştırma Hastanesi Çocuk Acil Servisine intihar girişimi nedeniyle başvuran 0-18 yaş arası çocukların dosyalarının geriye dönük olarak incelenmesiyle yapılmıştır.

Bulgular: Çalışmaya dahil edilen 282 olgunun 227'si (%80.5) kız ve 55'i (%19.5) erkekti. En yaygın yöntem aşırı doz ilaç alımı (%94.6) ve ardından kesi (%1.7) idi. 85 hastanın psikiyatrik ilaç kullanım öyküsü vardı ve 53'ü kullandığı ilacı içerek intihar girişiminde bulunmuştu. İntihar girişimi için en yaygın neden aile içi çatışma olarak bulundu (%49.2). En yaygın psikiyatrik tanı majör depresif bozukluktu (%42.9). Acil servis tedavisi tamamlanan 105 (%37) çocuk, çocuk-ergen psikiyatrisi ile konsülte edilmiş ve 12 (%4.3) çocuk da psikiyatri servisine sevk edilmiştir.

Sonuç: İntihar girişimi ile başvuran hastalar değerlendirilirken, girişimin özelliklerinin bilinmesinin tedavinin seyrinde ve koruyucu sağlık hizmetlerinin etkinliğinin arttırılmasında faydalı olabileceği düşünülmektedir.

Anahtar Kelimeler: İntihar girişimi, çocuk, ergen, çocuk acil, psikiyatri

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Başvuru Tarihi/Received: 16.09.2023
Kabul Tarihi/Accepted: 12.10.2023

INTRODUCTION

The concept of suicide includes suicidal thoughts, plans and actions, suicide attempts and completed suicides (1). The spectrum of suicidal thoughts in the pediatric period ranges from occasionally thinking that life is no longer worth living to actively considering suicide (2). Suicide is a public health crisis and ranks 2nd among the causes of death in adolescents aged 15-19 years. In the pediatric period, suicidal thoughts and actions show a linear increase from the age of 12 to 15 years, while the rate of increase decreases between the ages of 15 and 17 (3).

According to the World Health Organization (WHO) data, suicidal behavior among children and adolescents is increasing and suicide is becoming one of the major health problems worldwide (4). In western countries, suicide is the second or third most common cause of death in adolescence (5). Some risk factors may indicate the development of suicidal tendencies in children and adolescents. These risk factors include previous suicide attempts (6,7), mental illness: in particular, depressive disorder and bipolar disorders, acute psychotic disorder, post-traumatic stress disorder (8), dependency diseases, bulimia nervosa, attention deficit/hyperactivity disorder, anxiety disorders, disordered social behavior with elevated impulsiveness, personality disorders with elevated impulsiveness, delinquency (9-11), suicidal behavior in the familyand among friends (12), conflict, separation, or divorce of parents, loss of a parent, or a history of sexual abuse/maltreatment (13), performance problems at school (14), chronic organic illness and physical disability (9), low socioeconomic status (15).

Identifying risk factors for suicide attempts during treatment plays an important role in deciding on appropriate preventive measures and especially in identifying children and adolescents at risk. In this context, the aim of this study was to retrospectively examine the factors that may be related to suicidal behavior in children and adolescents and to provide a source for further studies.

MATERİALS AND METHODS

Data use permission and Ethics Committee Approval for the study were obtained from Ümraniye Training and Research Hospital (Date: 23/02/2023- Number: B.10.1.TKH.4.34.H.GP.0.01/50).

This study was conducted by retrospectively analyzing the files of children aged 0-18 years who were admitted to the Pediatric Emergency Department of Ümraniye Training and Research Hospital between January 2018 and December 2022 due to suicide attempt. The data obtained from the patient files included age, gender, living status, habits, type of suicide attempt, reasons for the attempt, patient status after the emergency, psychiatric diagnosis before emergency admission, if any, and diagnosis of psychiatric consultation.

Statistical Analysis

IBM SPSS 23.0 program was used for statistical analysis. Descriptive statistics including number, percentage, mean and standard deviation values were used in the analysis of the data.

RESULTS

In this study two hundred eighty two patients who were referred to the emergency department due to suicide attempt were included. Of the 282 cases, 227 (80.5%) were female and 55 (19.5%) were male (**Table 1**). Most of the cases (94.6%) were between 13 and 17 years old, nine cases were 12-year-old and six cases were between 7 and 11 years old (**Table 1**).

258 (91.5%) of the 282 cases were living with their families, 10 (3.6%) cases were living with mother, 6 (2.1%) cases were living with father and 8 (2.8%) cases werestaying in the child welfare institution (**Table 1**).

7 (2.4%) of the 282 cases were smoking, 4 (1.4%) cases were drinking alcohol, 5 (1.8%) cases were using substance. 94 (33.3%) patients had a history of psychiatric illness and 85 (30.1%) patients were using of psychiatric drugs (**Table 1**).

Table 1. Demographic data of cases with suicide attempt

	Number	Percentage (%)
Sex		
Girl	227	80.5
Boy	55	19.5
Age (year)		
7-11	6	2.3
12	9	3.2
13	22	7.8
14	48	17
15	50	17.7
16	65	23
17	82	29.1
Living Status		
Parents	258	91.5
Mother	10	3.6
Father	6	2.1
Child welfare institution	8	2.8
Habits		
Smoking	7	2.4
Alcohol	4	1.4
Substance	5	1.8
History of a past psychiatric disorder		
Yes	94	33.3
No	188	66.7
Use of psychiatric drugs		
Yes	85	30.1
No	197	69.9

When suicide attempt methods were evaluated, the most common method of suicide attempt was by taking drugs overdose (94.6%). This was followed by cutting oneself (1.7%), drinking chemicals (1.1%),drinking alchol (1.1%), use substance (1.1%) and jumping from high places (0.4%). It was found that 48 (17.02%) of the cases had attempted suicide before (**Table 2**).

The reasons for a suicide attempt were evaluated, it was found that conflict with the family (49.2%), followed by problems with friends (20.6%), problems with romantic-partner (11.3%), unhappiness (9.9%) problem with school (3.5%), parental divorce (3.2%) and exam anxiety (2.1%) (**Table 2**).

Considering the course of the cases after their evaluation and treatment in the emergency room, 11(3.9%) cases discharged from the emergency service, 139 (49.3%) cases discharged with the recommendation of pediatric outpatient clinic control, 105 (37%) cases started psychiatric treatment and recommended psychiatric outpatient clinic control, 12 (4,3%) cases transferred to the psychiatry ward, 1 (0.4%) case hospitalized in the pediatric service and received help from social services and 14 (4.9%) cases received help from social services (**Table 2**).

Table 2. Suicide attempt and its characteristics and the situation after emergency unit treatment

	Number	Percentage (%)
Method of suicide attempt		
Taking drug overdose	267	94.6
Cutting oneself	5	1.7
Drinking chemicals	3	1.1
Drinking alchol	3	1.1
Use substance	3	1.1
Jumping from high places	1	0.4
Numbers of suicide attempt		
First	234	83
Second	30	10.6
Third	10	3.6
>3	8	2.8
Reasons of suicide attempt		
Conflict with family	139	49.2
Problems with partner	32	11.3
Problems with friends	58	20.6
Problems with school	10	3.5
Exam anxiety	6	2.1
Parental divorce	9	3.2
Unhappiness	28	9.9
After treatment in the emergency unit		
Pediatric outpatient clinic control	139	49.3
Starting psychiatric treatment+ psychiatry outpatient clinic control	105	37
Referral to psychiatric ward	12	4.3
Referral to children ward+ social services	1	0.4
Social services	14	4.9
Discharge	11	3.9

According to information from the files of patients consulted with psychiatry, the most common psychiatric diagnosis was major depressive disorder (42.9%), followed by conduct disorder (34.3%) and anxiety disorder (12.4%) (**Table 3**).

Table 3. Psychiatric consultation diagnosis of the subjects

	Number	Percentage (%)
Major depressive disorder	45	42.9
Conduct disorder	36	34.3
Anxiety disorder	13	12.4
Adjustment Disorder	5	4.8
Mental retardation	5	4.8
Grief	1	0.8

DISCUSSION

In this study, the files of children and adolescents who presented to the emergency department with suicide attempt in a 5-year period were evaluated retrospectively. It was observed that the majority of the cases were girls and this is consistent with the literature in our country and in the world. In the literature, the majority of children and adolescents with both suicidal ideation and suicide attempts are girls (16-18). The majority of children who die as a result of suicide are boys (17,19), and there was no case of death among the patients who presented to the pediatric emergency department with suicide attempt and whose emergency department treatment was completed in the interval of our study. When we look at the age range, again in accordance with the literature, suicide attempts show a rapid increase between the ages of 13-17 (16,18).

Suicide methods differ in children and adolescents (drug overdose, hanging, firearm, jumping from a height). There are publications supporting that the most common suicide attempt method in adolescents is drug overdose (20-23). In our study, drug overdose ranked first with a rate of 94.6%. Another striking point in our study is that 85 (30.14%) of the children who attempted suicide were using psychiatric drugs before suicide and 53 (18.79%) of these children attempted suicide by using their own medication. In the literature, some of the risks that may occur during the use of psychopharmaceutical drugs have been examined, with a particular focus on antidepressants and selective serotonin reuptake inhibitors from this group. It has been claimed that serotonin reuptake inhibitors lead to behavioral activation in adolescents with suicidal ideation (24,25). In our study, we could not obtain information about the medications previously used by the children, but it is known that these were psychopharmaceutical drugs. Considering this situation, it can be suggested that adolescents receiving psychopharmaceutical treatment should be monitored more carefully. In addition, this may be due to the easy accessibility of medications.

Therefore, it may be important for children and adolescents not to have access to medication, especially in the early and risky periods of treatment, and to keep medication intake under family control to prevent suicidal behavior.

Previous suicide attempts are among the factors that increase the risk of suicide (28,29). Forty-eight (17.02%) of the children included in our study had attempted suicide before. The first treatment of children and adolescents who have attempted suicide is usually performed in emergency departments and the emergency department physician should be aware that the patient may still continue self-destructive actions and should act carefully in addition to initiating physical treatment (26). In the emergency department, it may be useful to question the patient about both previous suicides and current suicidal ideation.

Other risk factors also play a role in child and adolescent suicide attempts and problematic family relationships have an important place (20,27). In our study, intra-familial conflict ranked first as the reason for suicide and can be considered as an indicator of how much intra-familial relationships may affect the mental health of the child. In addition, the literature also shows that a troubled parent-child relationship is a risk factor for psychopathology in the child (27). In this case, conflict within the family may increase the child's stress level, increasing the development of psychopathology or exacerbating existing psychopathology. With this cumulative effect, we can say that family conflict is the mechanism that pulls the trigger.

Peer bullying and having problems with friends can be triggers for suicide attempts. In a study examining risky behaviors in young people in the USA, 19% of high school students in 39 states and 21 large urban school districts were bullied in the last 1 year and 7.4% of these young people attempted suicide (16). In our study, partner and friend problems were among the reasons for attempted suicide, and school problems, unhappiness, test anxiety, and parental separation were the other factors listed. It is clearer how negative life events trigger and affect individuals, highlighting the significance of consulting child and adolescent psychiatrists. Psychiatric treatment was initiated in 105 of the cases in our study and 12 were referred to an inpatient psychiatric service. These data again show the necessity of child and adolescent psychiatric consultation.

When children and adolescents who have attempted suicide are examined, the most common accompanying psychiatric diagnosis is major depression and the presence of psychopathology is the first-ranking risk factor for suicide attempt (28). In our study, 94 patients had a previous history of psychiatric illness and 105 of them were consulted with child and adolescent psychiatry after completion of emergency room treatment and the most common diagnosis was major depression. The diagnosis of conduct disorder and anxiety disorder followed major depression. All these data again indicate that the psychiatric diagnosis should not be missed and the child's mental state should be taken into consideration.

CONCLUSION

A detailed examination of the characteristics of suicidal behavior in children and adolescents can provide important advantages in the continuation of treatment. In addition, suicides can be prevented by identifying and preventing risk factors.

ETHICAL DECLARATIONS

Ethics Committee Approval: The study protocols were approved from Ümraniye Training and Research Hospital (Date: 23/02/2023-Number:B.10.1.TKH.4.34.H.GP.0.01/50).

Informed Consent: Because the study was designed retrospectively, no written informed consent form was obtained from patients.

Referee Evaluation Process: Externally peer-reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

Author Contributions: All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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