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Evaluation of the Suicide Reasons and Anger Involved In Suicide Attempters Who Come to the Emergency Service

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Abstract

Aim: This study aimed to describe the reasons and the anger that drives patients to attempt suicide.

Materials and Methods: This is a descriptive study which was conducted with 217 patients that stayed in the Toxicology Intensive Care Unit and had attempted suicide. The data were collected during interviews conducted with the patients, using aquestionnaire form, which included questions on patients' personal information, and the Continuous Anger and Anger Expression Style Scale.

Results: All of the participating patients had taken medication or toxic substances in their attempt to commit suicide. Among the reasons attributed to the patients' attempts to commit suicide, 30% were based on familial issues, 23% on loneliness and harassment and 16.1% due to mental illnesses. Prior attempts at suicide had been committed by 20.3% of the patients, and 38.2% had been previously diagnosed with a psychiatric illness. In terms of the Continuous Anger and Anger and Expression Style score, the *Continuous Anger* sub-scale mean score was 27.34 (SD=6.33); the *State Anger* sub-scale mean score was 22.71 (SD=3.84); the *Controlled Anger* sub-scale mean score was 16.76 (SS=4.98); the *Expressed Anger* sub-scale mean score was 19.92 (SD=5.69); and the *Internalized Anger* sub-scale mean score was 18.71 (SD=3.98).

Conclusion: The study found that medication and toxic substances were the main means by which the patients attempted to commit suicide and that they were in their adolescent period and had low educational levels. Furthermore, those who had made prior attempts at suicide and/or who had been diagnosed with a psychiatric illness were included in the risk group. Lastly, the patients who attempted to commit suicide had high anger mean scores.

Keywords: Anger, Emergency service, Reasons for suicide, Suicide

Introduction

Suicide, defined as the act of killing yourself, as clearly demonstrated with evidence showingthe aim or intent to die, is currently a major public health issue (Sudak, 2007). In addition to being devastating for both families and communities, suicides are marked bymajor gender and social inequality gaps (World Health Organization, 2014). According to data provided by the World Health Organization (WHO), over 800,000 people commit suicide every year, and an even greater number attempt it. A previous suicide attempt is the most important risk factor for suicide in the general population. Of all suicides in the world, 75% occur in low and middle-income countries (World Health Organization, 2014). In the past 45 years, suicide rates have increased by 60% worldwide, and the global mortality rate is 16 out of 100,000. A case of suicide occurs every 40 seconds worldwide (World Health Organization, 2014). With a prevalence of 3.5%, suicide attempts are more frequent than those that are successfully carried out, and it is anticipated that more than 10% of those who commit suicide will make another attempt within 10 years (Suominen et al., 2004).

Data from WHO show that suicide is one of the leading causes of death in developed countries. It is the eighth leading cause of death following heart disease, cancer, cerebrovascular disease, accidents, diabetes, pneumonia and cirrhosis. It's been reported that suicide is the leading cause of death among persons between the ages of 15 and 44 and the second leading cause of death in those between the ages of 15 and 29 (World Health Organization, 2014).

There were a total of 6,708 suicides in the UK and the ROI in 2013.According to the records, there were 6,233 suicide cases in the UK in 2013. This corresponds to a rate of 11.9 per 100,000 population (19.0 per 100,000 for men and

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5.1 per 100,000 for women) (World Health Organization, 2014). It has also been reported that the number of suicide attempts is 10 times larger than those resulted in death (Sudak, 2007). The Turkish Statistical Institute (TurkStat) has been compiling suicide statistics in Turkey since 1962 and announcing them since 1974. According to 2013 data, the number of suicide attempts that resulted in death were 3,252. This number increased to 3,065 in 2014. Of those who committed suicide, 74.3% were males and 25.5% were females. The rate of suicide, which is the number of suicides per 100,000 people in a population, was 4.27 in 100,000 population in 2013, while it was 3.97 in 2014. In other words, four out of 100,000 people committed suicide in 2014 (Turkish Statistical Institute, 2014).

Of the unsuccessful attempts at suicide by individuals, 90 to 95% of them suffered from a psychiatric disorder, with the leading one being major depression (Devrimci, 2008). Affective disorder, chronic anxiety, behavioral disorder and substance abuse also were shown to increase the risk of suicide (Ebert et al., 2013). Suicidal thoughts and plans were other factors that increase the risk of suicide attempts, while prior suicide attempts were an indicator of a high risk of suicide (Beghi & Rosenbaum, 2010).

According to studieson the clinical characteristics of adolescents who attempt to commit suicide, this particular group is impulsive and angry, and tends to be violent, introvertedand over-sensitive. They also have perfectionist personality traits (Sahin, Onur, & Basim, 2008). From a clinical perspective, it has been observed that anger and internal destructive drives are predictive factors for suicide among adolescents (Batigun & Sahin, 2003).

If anger is not expressed and externalized in appropriate ways, it can cause physical, psychological and social problems (Albayrak & Kutlu, 2009; Starner & Peters, 2004). The expression of anger is the externalization of anger verbally and/or in behavioral ways and serves as an adaptive reaction in handling stress (Albayrak & Kutlu, 2009; Starner & Peters, 2004; Wolf & Foshee, 2003). When a person does not control their anger in a healthy way, they reflect it onto to themselves or project it ontothose around them, exhibit aggressive behavior and show violence (Herrmann & McWhirter, 2003). The classical theory of psychoanalysis argues that internal anger is actually the suppression of anger, which transfers the existing energy back into the interior, and is therefore included in the etiology of depression (Turkcapar et al., 2004). Freud claimed that mourning and melancholia were triggered by actual or symbolic losses. He explained the feelings of self-accusation and suicide in depressive patients as the self-direction of the anger against the lost object in the form of the desire to harm oneself (Odag, 2008).

The aim of this study was to identify the reasons patients had for attempting suicide, and to determine their state anger.

Materials and Methods

Design

This research wasconducted as a descriptive study involving patients placed in the Konya Training and Research Hospital's Toxicology Intensive Care Unit between October 2014 and December 2014. The study population included the patients who presented to the emergency service at the Konya Training and Research Hospital due to suicide attempt between the given dates and stayed in the Toxicology Intensive Care Unit located in the emergency service. The study sample included 217 patients who were 15 years of age or older, agreed to participate in the study, were able to communicate and met the research criteria. All cases who come to the emergency service due to suicide attempt are taken to the Toxicology Intensive Care Unit in the emergency service, and all treatment initiatives are performed in this unit.

Data Collection Tools

The study data were collected using the Patient Description Form and the Continuous Anger and Anger Expression Style Scale (CAAESS).

Patient Description Form

The author created this form based on the relevant literature. This form included questions about patients' socio-demographic characteristics (e.g. age, gender, marital status, educational status, household, place of residence, income level, person who raised the patient) andquestions seeking to determine what might have been the cause of the suicide attempt (e.g. state of family in childhood, reason for suicide, past suicide attempts, past suicide attempts in family, past psychiatric diagnosis, past psychiatric diagnosis in the family, psychiatric therapy received in the past six months).

The Continuous Anger and Anger Expression Style Scale (CAAESS)

This scale was created by Spielberger et al. (1983) and translated into Turkish by Ozer (1994). It measures anger and anger expression. The scale consists of the following two sections.

Continuous Anger Scale

This scale consists of two sub-dimensions, Continuous Anger and State Anger. Continuous Anger is indicated by the total score of the first 10 items, while State Anger is indicated by the total score of the second 10 items.

Anger Expression Style Scale

This scale consists of three sub-dimensions,Controlled Anger, Expressed Anger and Internalized Anger. Controlled Anger is indicated by the total score of items 11, 14, 18, 21, 25, 28, 30 and 34 (eight items); Expressed Anger is indicated by the total score of items 12, 17, 19, 22, 24, 29, 32 and 33 (eight items); and Internalized Anger is indicated by the total score of items 13, 15, 16, 20, 23, 26, 27 and 31 (eight items).

Higher scores on the Continuous Anger sub-dimension indicate a high level of anger; higher scores on the Controlled Anger sub-dimension indicate that the person is capable of controlling their anger; higher scores on the Expressed Anger sub-dimension indicate that the person expresses their anger easily and higher scores on the Internalized Anger sub-dimension indicate that the anger is suppressed.

The Cronbach's alpha coefficient of the scale is 0.77, while for this studythe Cronbach's alpha coefficient was 0.76.

Data Collection

The author collected the study data at the time of the interviews, which were held during working hours (08:00-16:00 and 16:00-08:00). The patients were informed about the study objective and the author also obtained their verbal consent. It took approximately 10 minutes to administer the data collection forms.

Data Analysis

The study data were analyzed and encoded using the Statistical Package for the Social Sciences for Windows (SPSS) 16.0 software program. Assessments of the study data were carried out using the x2 test, independent samples t test, Kruskal–Wallis analysis of variance, and the Mann-Whitney U test.

The study data were analyzed in the electronic environment using percentages, mean scores and the chi-square test. The significance level of the study was set at 0.05. Values below 0.05 were considered statistically significant, while values above it were considered statistically insignificant. To determine the significance between the groups, the author used LSD, one of the post hoc tests, where the number of groups was three or more, since the variance between the groups was equal.

Ethical Approval

Approval was obtained from Ataturk University's Health Sciences Institute's Ethics Committee before conducting the study, and written consent was obtained from the study participants after presenting them with an information form including the objective and the extent of the study. The patients were informed verbally about the aim of the study because using the human cases in the study requires the protection of the individual rights. The patients were informed that the individual information patients shared with the researcher will be preserved. It was explained to them if they had the option not to participate in the study. Thus the "Informed consent", "Autonomy", "Privacy and Protection of Privacy" ethical principles were met and verbal permission were received from the patients.

Results

All participating patients had attempted to commit suicide by taking medication or toxic substances.

An analysis of the personal information of the participating patients (Table 1) revealed that a majority of the patients were between 15 and 24 years of age, female, single, completed their elementary education, unemployed and lived in the city with their parents, had a high income level, raised with sufficient care in their childhood and had families that were not fragmented.

Among the reasons for patients' attempting to commit suicide, 30% were attributed to family-related issues, 23% to loneliness and/or harassment, 16.1% to mental illnesses, 13.4% to economic problems, 12% to problems with the opposite sex and 8.8% to alcohol and substance addiction. Furthermore, 20.3% of the patients had attempted suicide in the past, 2.3% had had a family member who attempted suicide in the past, 38.2% had been diagnosed with a psychiatric disease before, 3.7% had a family member who had been diagnosed with a psychiatric disease and 29% had received psychiatric therapy within the last six months.

The distribution of the mean scores on CAAESS is presented on Table 2. The participatingpatients' mean score on the Continuous Anger sub-dimension of the Continuous Anger Scale was 27.34 (SD=6.33), and the State Anger mean score was 22.71 (SD=3.84).

Participants' mean score on the Controlled Anger sub-dimension of the Anger Expression Style Scale was 16.76 (SD=4.98), 19.92 (SD=5.69) on the Expressed Anger sub-dimension and 18.71 (SD=3.98) on the Internalized Angersub-dimensions.

A comparison of the patients' mean scores on CAAESS according to their personal characteristics (Table 3) revealed that participants between the ages of 15 and 24 had significantly higher mean scores on the State Anger and Controlled Anger sub-dimensions, while those who were 35 and older obtained statistically significant high mean scores on the Internalized Anger sub-dimension ($p<0.05$). It was found that the reason forthis significance was that the groups included participants between the ages of 15 and 24.

According to the study findings, patients who lived alone had significantly high mean scores on the State Anger sub-dimensions, whereas those who lived with their families

Table 1. Distribution of patients' personal information

Characteristics	Number (N= 217)	Percentage
Age		
15-24	126	58.1
25-34	56	25.8
35 and older	35	16.1
Gender		
Female	133	61.3
Male	84	38.7
Marital Status		
Married	94	43.3
Single	123	56.7
Educational Level		
Non-educated	19	8.8
Elementary Education	126	58.1
High School	55	25.3
Undergraduate	17	7.8
Employment Status		
Employed	75	34.6
Unemployed	142	65.4
Household		
Living alone	9	4.1
Only spouse	13	6.0
Spouse and children	54	24.9
Parents	83	38.3
Other (e.g. roommates)	58	26.7
Residence		
Village	21	9.7
Town	20	9.2
City	176	81.1
Income Level		
Low	15	6.9
Moderate	57	26.3
High	145	66.8
Who were you raised by?		
Mother	23	10.6
Both parents	183	84.3
Other (e.g. nanny)	11	5.1
Childhood Care		
Extreme	28	12.9
Sufficient	152	70.0
Neglected	37	17.1
State of Family in Your Childhood		
Together	181	83.4
Fragmented	36	16.6
Reason for Suicide*		
Family	65	30.0
Loneliness, Harassment	50	23.0
Mental illness	35	16.1
Economic	29	13.4
Problems with the opposite sex	26	12.0
Alcohol and Substance Addiction	19	8.8
Communication problems	17	7.8
Developmental period problems	14	6.5
Domestic violence	12	5.6
Death/Loss	11	5.1
Exam anxiety	9	4.1
School	6	2.8
Job	6	2.8
Disease	6	2.8
Marriage	5	2.3
Children	4	1.8
Arguing parents	4	1.8
Sexual problems	2	0.9
Not having a home to live in	1	0.5
Chronic condition	1	0.5
Past suicide attempts		
Yes	44	20.3
No	173	79.7
Past suicide attempts in family		
Yes	5	2.3
No	212	97.7
Past psychiatric diagnosis		
Yes	83	38.2
No	134	61.8
Past psychiatric diagnosis in the family	8	3.7
Yes	209	96.3
No		
Psychiatric therapy received in the past six months	63	29.0
Yes	154	71.0
No		

*Multiple options are checked.

had significantly high mean scores on the Controlled Anger sub-dimension ($p<0.05$). The significance was due to the group including patients who lived with people other than their families.

An analysis of patients' mean scores by their income levels revealed that those who had a high income level had higher mean scores on the Controlled Anger sub-dimension than those who had moderate and low income levels ($p<0.05$). The statistical significance between income levels and Controlled Anger was due to the group with the low income level.

The patients who reportedthat they had not been provided with much care in their childhood had higher mean scores on the State Anger sub-dimension while those who reported that they were provided an extreme level of care obtained higher mean scores on the Controlled Anger sub-dimension ($p<0.05$). It was found that the reason forthis statistical significance was that the group included patients who did not receive enough attention when being raised. The patients who lived in families that were not fragmentedduring their childhood obtained higher mean scores than those who lived in fragmented families ($p<0.05$).

The patients who had attempted suicide before had higher scores on the Continuous Anger and Expressed Anger sub-dimensions while those who had not attempted suicide had higher scores on the Controlled Anger sub-dimension ($p<0.05$). Regarding the patients who had been diagnosed with psychiatric disorders and had received psychological therapy within the last six months, they had higher mean scores on the Continuous Anger, Expressed Anger andInternalizedAnger sub-dimensions, while those who were not diagnosed with a psychiatric disorder obtained higher mean

Table 2. The distribution of minimum and maximum scores on CAAESS and the mean score

Scale		Range	Mean Score±SD
Continuous Anger	Continuous Anger	11-40	27.34±6.33
	State Anger	14-38	22.71±3.84
Anger Expression Style	Controlled Anger	8-29	16.76±4.98
	Expressed Anger	8-32	19.92±5.69
	Internalized Anger	10-31	18.71±3.98

scores on the Controlled Anger sub-dimension ($p<0.05$). The reason for the statistical significance hereis that the group included the patients who did not have any past suicide attempts and did not receive any psychiatric diagnosis.

There was no statistically significant difference between the patients in terms of gender, marital status, educational levels, employment status, residence, past suicide attempts in the family and prior diagnosisof psychiatric disordersand CAAESS mean scores ($p>0.05$).

Discussion

Suicide currently presentsa major public and mental health issue and is a leading cause of death worldwide. All indications suggest that this issue will continue to remain at its current level (Altindag, Sir, & Ozkan, 2001). It is therefore imperative to develop strategies that are able to identify high-risk cases in the effort to prevent suicidal behavior. This study aimed to analyze the reasons and the different types and expressions of anger in patients who attempted to commit suicide and then presented the study findings to facilitatea discussion based on the information provided in the relevant literature.

Overdosing on medication is one of the most frequent methods used in suicide attempts. Many of the studies conducted in Turkey also revealed that this was the mostly frequently used method (Gidis et al.,1997; Bitlis et al., 1994; Sayil et al., 1993). In another study, it was determined that 94.73% of those attempting suicide took medication to carry it out (Tezcan, Oguzhanoglu, & Ulkeroglu, 1995). This present study found that all of the patients took either medication or toxic substances to commit suicide.

According to WHO data, the prevalence of suicide is higher among males compared to females, except in China(World Health Organization, 2014). The relevant literature indicates that while the rate of completed suicides is higher among males, the rate of suicide attempts is higher among females. The ratio of females attempting suicide to males ranges between 3/1 and 9/1 (World Health Organization Website, 2014; Akin & Berkem, 2012; Eskin, 2012; Ercan, Varan, & Aydın, 2000; Tsirigotis, Gruszczynski, & Tsirigotis-Woloszczak, 2011). In the U.S., the number of suicide attempts among females is three times higher than it is among males. On the other hand, the number of completed suicides among males is three times higher than it is among females. This study also found that suicide attempts were more common among females than they were among males. The study conducted by Devrimci, Ozguven and Sayil (2003) between 1998 and 2001 in Ankara found that the rate of annual suicide attempts among males was 46.89/100000 and 112.89/100000 among females. This difference between the rates results from the fact that females are more inclined to ask for help when they have mental problems and that the role of "patient" is less stigmatizing for females than it is for males. Apart from these, researchers have put forward many opinions to explain the reasons for the high rate of suicide attempts among females and high rate of completed suicides among males. Some of these reasons are that females are not as impulsive as males, alcohol and drug addiction is rarer among females, females tend to prefer less fatal and painful methods to commit suicide, such as medication, and females build much more intimate relationships than males do and have stronger social support networks (Sudak, 2007; Oto, Ozkan, & Altindag, 2004). The fact that major depression, one of the most important risk factors for suicide, is more common among females serves as another reason for the higher rate of suicide attempts among females.

When suicidal behavior is addressed by age, it is observed that the rates of completed suicide are different. The highest rate of completed suicides worldwide occurs among those older than 65. However, reports have shown that a majority of deaths caused by suicides in the last 20 years are among those between the ages of 15 and 44 and that the rate of suicide among young persons is increasing rapidly (World Health Organization Website, 2014). In Turkey, the studies that have been conducted indicate that females between 15 and 24 years of age and males between 20 and 35 years of age have a higher risk of suicide (Devrimci-Ozguven & Sayil, 2003). Similarly, the results of this studyshowed thatthe patients who attempted suicide were between 15 and 24 years of age, and that their mean anger scores were significantly higher than those of the other age groups. Suicidal thoughts and suicide rates are increasing rapidly among young persons in many countries (Oto, Ozkan, & Altindag, 2004). A study conducted in Ankara screened the applications citing suicide attempts made to the emergency services and determined that attempts were increasing among those between

Table 3. A comparison of patients' CAAESS mean scores according to their personal characteristics

Characteristics	Continuous Anger		Anger Expression Style		
	Continuous Anger	State Anger	Controlled Anger	Expressed Anger	Internalized Anger
	$\overline{X}$ ± SD	$\overline{X}$ ± SD	$\overline{X}$ ± SD	$\overline{X}$ ± SD	$\overline{X}$ ± SD
Age					
15-24	27.21±6.01	23.27±3.69	17.63±4.91	19.36±5.48	18.51±3.93
25-34	26.71±6.36	21.71±4.07	16.46±4.83	19.96±5.94	18.16±3.83
35 and older	28.80±7.28	22.31±3.73	14.11±4.59	21.88±5.75	20.31±4.12
Significance	p>0.05	**p<0.05**	**p<0.05**	p>0.05	**p<0.05**
Gender					
Female	27.57±6.37	22.81±3.64	16.69±4.84	19.96±5.97	18.88±4.28
Male	26.96±6.27	22.55±4.16	16.88±5.23	19.86±5.26	18.44±3.45
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Marital Status					
Married	27.55±6.29	22.26±3.92	16.12±4.99	20.14±6.01	18.82±4.05
Single	27.17±6.37	23.06±3.76	17.25±4.94	19.75±5.45	18.62±3.94
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Educational Level					
Non-educated	30.73±7.14	22.42±4.20	14.89±6.11	22.84±6.51	20.21±3.44
Elementary Education	27.08±6.42	22.48±3.64	16.79±4.98	19.53±5.62	18.67±3.92
High School	26.85±5.53	22.83±4.37	17.00±4.86	19.65±5.30	18.20±4.24
Undergraduate	27.00±6.53	24.41±2.82	17.88±3.70	20.41±6.03	19.00±4.01
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Employment Status					
Employed	26.77±6.50	22.61±3.81	17.06±5.52	19.44±5.64	18.48±3.51
Unemployed	27.64±6.24	22.77±3.87	16.60±4.69	20.18±5.72	18.83±4.21
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Household					
Living alone	31.44±4.53	24.44±6.24	15.22±6.32	24.00±4.71	20.22±4.65
Only spouse	28.61±5.89	24.07±4.17	17.15±5.81	21.92±6.52	20.07±4.53
Spouse and children	26.44±6.78	21.75±3.87	15.92±4.60	19.53±6.30	18.25±3.65
Parents	26.63±5.82	23.67±3.53	18.03±4.50	19.62±4.99	18.80±4.07
Other	28.25±6.69	21.67±3.26	15.87±5.32	19.63±5.83	18.46±3.9 p>0.05
Significance	p>0.05	**p<0.05**	**p<0.05**	p>0.05	
Residence					
Village	26.95±6.21	23.14±4.71	16.57±4.75	19.61±4.99	20.00±4.57
Town	29.50±6.07	23.20±3.60	16.10±4.19	19.95±5.20	19.80±4.31
City	27.14±6.36	22.61±3.77	16.86±5.11	19.96±5.84	18.43±3.84
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Income Level					
Low	28.13±7.52	22.86±4.08	13.33±4.18	20.73±5.98	19.86±4.80
Moderate	28.07±6.21	21.80±3.60	15.70±4.53	20.68±5.58	18.98±3.97
High	26.97±6.26	23.06±3.88	17.53±5.03	19.54±5.71	18.48±3.89
Significance	p>0.05	p>0.05	**p<0.05**	p>0.05	p>0.05
Who were you raised by?					
Mother	28.26±6.54	23.13±3.55	16.30±4.81	20.65±5.83	18.65±3.96
Both parents	27.22±6.37	22.62±3.93	17.00±4.94	19.77±5.63	18.68±4.05
Other (Nanny)	27.36±5.46	23.45±2.94	13.72±5.38	20.90±6.71	19.36±3.00
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Care Provided to You in Your Childhood					
Extreme	26.25±6.58	23.42±2.98	18.75±5.00	19.00±6.24	18.28±4.31
Sufficient	27.46±6.40	22.34±4.07	16.78±4.97	19.71±5.54	18.46±3.97
Neglected	27.67±5.90	23.72±3.22	15.16±4.59	21.48±5.74	20.05±3.55
Significance	p>0.05	**p<0.05**	**p<0.05**	p>0.05	p>0.05
State of Family in Your Childhood					
Together	27.32±6.44	22.67±3.95	17.08±4.88	19.77±5.63	18.70±4.03
Fragmented	27.44±5.78	22.91±3.26	15.16±5.24	20.66±6.02	18.77±3.78
Significance	p>0.05	p>0.05	**p<0.05**	p>0.05	p>0.05

Past suicide attempts					
Yes	31.20±5.66	22.36±3.53	14.27±5.12	22.88±5.44	19.31±4.08
No	26.35±6.12	22.80±3.92	17.39±4.76	19.17±5.52	18.56±3.95
Significance	**p<0.05**	p>0.05	**p<0.05**	**p<0.05**	p>0.05
Past suicide attempts in family					
Yes	24.80±4.32	20.40±4.33	16.60±5.68	19.00±1.87	17.00±2.00
No	27.40±6.36	22.77±3.82	16.76±4.98	19.94±5.75	18.75±4.01
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Past psychiatric diagnosis					
Yes	29.18±5.69	22.67±3.41	15.63±4.71	21.43±5.43	19.63±3.84
No	26.20±6.45	22.74±4.09	17.46±5.03	18.99±5.66	18.14±3.97
Significance	**p<0.05**	p>0.05	**p<0.05**	**p<0.05**	**p<0.05**
Past psychiatric diagnosis in the family					
Yes	28.37±6.36	24.25±1.83	14.00±4.89	20.87±5.61	22.37±3.88
No	27.30±6.34	22.66±3.89	16.87±4.97	19.89±5.70	18.57±3.92
Significance	p>0.05	p>0.05	p>0.05	p>0.05	p>0.05
Psychiatric therapy received in the past six months					
Yes	29.90±5.91	22.76±3.33	15.17±4.94	21.98±5.73	20.09±3.85
No	26.29±6.21	22.70±4.04	17.41±4.87	19.08±5.47	18.14±3.90
Significance	**p<0.05**	p>0.05	**p<0.05**	**p<0.05**	**p<0.05**

the ages of 15 and 24 in particular (Sayil et al., 1993). Many factors influence suicidal behaviors in adolescents. Batigun and Sahin (2003)determined that anger and aggressiveness increased between the ages of 14 and 24, and that the risk of suicide also increased among those with particularly high levels of impulsiveness. Carli et al. (2010) found that young persons were more impulsive and that those with higher levels of impulsiveness were more inclined to suicide. Another reason for the high rate of suicides among adolescents can be attributed tothe fact that most psychiatric illnesses begin in this period and that adolescent patients are unableto comprehend the importance of symptoms and therefore rarely seek or accept therapy (Bakım, Özçelik, & Karamustafalıoğlu, 2007).Moreover, the persons in this age group have significantly higher state anger mean scores. This implies that they have insufficient problem solving skills and high levels of anger, aggressiveness and impulsiveness, which makes them consider suicide as an immediate solution when they face a stressful incident or situation. Therefore, there is an increased probability of suicide in these individuals.

Suicide is more commonly seen among single and divorced persons, as well as widows and widowers and married couples who live inseparate residences. In support of this evidence, many studies haveshown that marriage acts as a protective factor (Demirel & Esel, 2003; Ekici, Savas, & Citak, 2001). The present study also found that suicide attempts among single patients were more common than they were among married patients. The author believes the reason for this is that married persons make better use of social support systems. The number of suicides is twice as larger among single persons than it is among married individuals and four or five times larger than it is among individuals who are divorced or separated (Demirel & Esel, 2003). The household living arrangement is also an important factor in suicide attempts. According to the findings of this study, those who lived with their parents had higher mean scores of Controlled Anger. Individuals who had a warm family environment and felt that they were supported by their families were able to express their anger in a healthy way and also to control it adequately. On the other hand, persons who felt that their family environment was controlling and authoritativeexperienced anger more frequently, were not able to express their feelings in a comfortable way, needed to control these feelings and mostly directed their anger inwards, towards themselves.

According to various reports, one of theuniversal features of suicidal behavior is that those who demonstrateit have a low educational level (Agerbo, Nordentoft, & Mortensen, 2002; Turkish Statistical Institute, 2014). The studies conducted in Turkey also show that suicidal behavior is more common among those with a loweducation level (Gulec& Aksaray, 2006; Deveci et al., 2005; Sayil et al., 2000).In contrast, individuals who have a high education level are able to control their anger in a healthier manner, as education has been shown to have a positive effect on the reflection of anger. Sayil et al. (2000) found that 93% of those who attempted suicide had a high school or lower level of education. A cohort study conducted with 898,342 students in Sweden determined that the risk of suicide increased among those who had low levels of school achievement and graduated

with lower grades, all of which led toanger, desperation, unhappiness and low confidence (Björkenstam et al., 2011). According to the findings of this study, the highest rate of suicide attempts and the highest level of anger were among elementary school graduates, while the second highest rates were among high school graduates. The anger mean scores of those with low educational levels were high but not statistically significant. These results show that increasing the educational level isone of the most important strategies for preventing suicides in any given society.

The prevalence of unemployment is high in both suicides and suicide attempts (Agerbo et al., 2002; Cheng, Chen, & Jenkins, 2000). The pace of suicides is higher among the unemployed compared to the employed. The present study also found that the suicide rate was higher among the unemployed. The anger level of the unemployed group was higher than the employed group but not statistically significant. Having a job acts as a preventive against suicide. Suicide rates increase in times of economic depression and high unemployment rates, whereas it decreases in periods when the economy is in a good state (Devrimci, 2008).

The studies conducted on therisks of suicide associated with family matters determined that the major factors werethe presence of a suicide attempt in family history, domestic violence, mental illnesses in family history, physical and sexual harassment, insufficient social support, communication problems in family and negative economic status of the family (Agerbo et al., 2002; Brent et al., 2002; Cheng et al., 2000; Ozguven et al., 2003; Tsai et al., 2002). Among young persons, insufficient levels of communication in family, eitherexcessive or little to no expectations of parents for their children and excessive controlling behavior by parents towards their children are factors that were shown to increase suicides or suicidal attempts (Beautrais, 2000). In accordance with the relevant literature, thepresent study found that the most common reasons for suicide were family-related issues, loneliness, harassment, mental illnesses, economic problems and problems involving the opposite sex. Moreover, those who lived in fragmented families had lower mean scores in Controlled Anger. Usually, those who had weak anger control and behaved aggressively did not socialize enough in their family environment. Inconsistent and disinterested behavior of parents prevent adolescents from making a distinction between acceptable and unacceptable behavior. This may be the reason for the individuals' anger and aggressive behavior.

One of the most important risk factors for suicide is past suicide attempts (Tsai et al., 2002; Gould & Kramer, 2001; Beautrais, 2000). Of the completed suicides, 19 to 24% had past suicide attempts and of these attempts, 10% resulted in suicide within 10 years (Owens, Horrocks, & House, 2002). This study found that 20% of those who had committed suicide had attempted to do it before and that 38.2% had been diagnosed with a psychiatric illness. A history of suicide attempts isaccepted to be an obvious risk factor, not only for completed suicides but also for suicide attempts. Community samples have shown that 10% of the adolescents who have attempted suicide make two or more attempts within two years (Akin, & Berkem, 2012). In addition, those who had past suicide attempts had higher scores in State Anger and Expressed Anger. The relevant studies indicate that those who have past suicide attempts feel angrier in general.

The Continuous Anger sub-scale, one of the two major sub-scales of the Continuous Anger and Anger Expression Style Scale, reveals the general feelings of the person or the degree of their anger. This study found that those who attempted suicide had high continuous anger total scores. Anger and aggressive behavior are considered important risk factors for suicidal behavior. There are many studies that support the correlation between aggressiveness, impulsive behavior and suicide (Michaelis et al., 2004; Zouk et al., 2006).

Internal anger is an alternative adjustment mechanism. Persons tend to use it to conceal their anger or to keep it insidefor use against the pre-existing anger elements (Starner & Peters, 2004). According to the study findings, the internal anger scores of the patients were high. Akin and Berkem (2012) also determined that individuals who had past suicide attempts obtained high continuous anger scores. According to the classical theory of psychoanalysis, anger is included in the etiology of depression (Odag, 2008). The most common diagnosis among patients who attempt suicide is depression, which proves that high anger scores are very important for identifying high risk cases.

Conclusion and Suggestions

The increase seen in suicide rates in Turkey and throughout the world necessitates that studies be conducted on this issue. This study determined that medication and toxic substances were the primary means by which suicide attempts were carried out. Additional data from the study showed that the majority of suicide attempts were madeby adolescents with low educational levels, that suicide attempts were more common among females, that the presence of prior suicide attempts and psychiatric diagnoses triggered attempts to commit suicide and that those who had completed suicides had high anger scores.

The individuals who attempt suicide are usually adolescents. This implies that training adolescents about anger management and providing them with psycho-therapeutic and psycho-pharmacological training will help reduce the risk of suicide. In addition, it is recommended that individuals with past suicide attempts and psychiatric diagnosis be taken to school nurses or Guidance and Counseling Centers to determine their suicide risks, and following the provision of counseling, these individuals should be directed to a psychiatric clinic.

References

1. Agerbo, E., Nordentoft, M., & Mortensen, P. (2002). Familial, psychiatric, and socioeconomic risk factors for suicide in young people: nested case-control study. *BMJ, 325*(7355), 74.
2. Akin, E., & Berkem, M. (2012). An analysis of psychiatric diagnoses and demographic and clinical characteristics of the adolescents who have attempted to commit suicide. *Firat Medical Journal, 17*(4), 228-232.
3. Albayrak, B., & Kutlu, Y. (2009). Anger expression style in adolescents and correlated factors. *Maltepe University the Science and Art of Nursing Journal, 2*(1), 57-61.
4. Altindag, A., Sir, A., Ozkan, M., & (2001). The changes in suicide speed in Turkey (1974-1998). *Psychiatry in Turkey, 2*, 79-86.
5. Bakım, B., Özçelik, B., & Karamustafalıoğlu, O. (2007). Suicidal Behavior in Psychiatric Disorders. *Düşünen Adam: The Journal of Psychiatry and Neurological Sciences, 20*(1), 38-47.
6. Batigun, A., & Sahin, N. (2003). Could anger, impulsiveness and insufficient problem-solving skills be a predictor of adolescent suicides? *Turkish Psychology Journal., 18*(51), 37-52.
7. Beautrais, A. (2000). Risk factors for suicide and attempted suicide among young people. . *Australian New Zealand J Psychiatry, 34*(420-436.).
8. Beghi, M., & Rosenbaum, J. F. (2010). Risk factors for fatal and nonfatal repetition of suicide attempt: a critical appraisal. *Current Opinion in Psychiatry, 23*(4), 349-355.
9. Bitlis, V., Tuzer, T., Bayam, G., Dilbaz, N., Holat, H., & Tan, D. (1994). A retrospective analysis of the patients coming to the emergency unit in a public hospital for suicide attempt. *Kriz Journal, 2*(2), 323-326.
10. Björkenstam, C., Weitoft, G. R., Hjern, A., Nordström, P., Hallqvist, J., & Ljung, R. (2011). School grades, parental education and suicide—a national register-based cohort study. *Journal of epidemiology and community health, 65*(11), 993-998.
11. Brent, D. A., Oquendo, M., Birmaher, B., Greenhill, L., Kolko, D., Stanley, B., . . . Ellis, S. (2002). Familial pathways to early-onset suicide attempt: risk for suicidal behavior in offspring of mood-disordered suicide attempters. *Archives of general psychiatry, 59*(9), 801-807.
12. Carli, V., Jovanović, N., Podlešek, A., Roy, A., Rihmer, Z., Maggi, S., . . . Sarchiapone, M. (2010). The role of impulsivity in self-mutilators, suicide ideators and suicide attempters—A study of 1265 male incarcerated individuals. *Journal of affective disorders, 123*(1), 116-122.
13. Cheng, T., Chen, T., Chen, C., & Jenkins, R. (2000). Psychosocial and psychiatric risk factors for suicide Case—control psychological autopsy study. *The British Journal of Psychiatry, 177*(4), 360-365.
14. Demirel, O., & Esel, E. (2003). Suicide (Ozkiyim). *Anatolian Psychiatry Journal., 4*, 175-118.
15. Deveci, A., Taskin, E. O., Dundar, P. E., Demet, M. M., Kaya, E., Ozmen, E., & Dinc, G. (2005). The prevalence of suicidal thought and attempts in Manisa. *Turkish Psychiatry Journal., 16*(3), 170-178.
16. Devrimci-Ozguven, H., & Sayil, I. (2003). Suicide attempts in Turkey: results of the WHO-EURO Multicentre Study on Suicidal Behaviour. *Canadian Journal of Psychiatry, 48*(5), 324-329.
17. Devrimci, O. (2008). An Analysis of the Risk of the Suicidal Behavior Clinics in Turkey. *Journal of Psychiatry- Special Topics, 1*(3).
18. Ebert, M., Loosen, P., Nurcombe, B., & Leckman, J. (2013). *Current Diagnosis and Treatment" Series, Psychiatric Diagnosis or Therapy* (S. Candansayar Ed. 2 ed.): Ankara Gunes Tip Kitabevleri.
19. Ekici, G., Savas, H., & Citak, S. (2001). Psychological factors which increase the risk of suicide (lack of social security, immigration and other stressors. *Anatolian Psychitary Journal, 2*(4), 204-212. .
20. Ercan, E., Varan, A., & Aydın, C. (2000). The Sociodemographic, Psychiatric, and Familial Aspects of Adolescents Who Attempted Suicide. Çocuk ve Gençlik Ruh Sağlığı Dergisi/ Turkish Journal of Child and Adolescent Mental Health, 7(2), 81-91.
21. Eskin, M. (2012). *Suicide: Explanation, Evaluation and Treatment and Prevention. Section 5: Risk Factors*. Ankara: HYB Basim Yayin.
22. Gidis, D., Kaya, N., Çilli, A. S., Ozkan, I., & Şahinoglu, U. (1997). An analysis of the adolescents coming to Selcuk University's Faculty of Medicine for suicide attempt. . *Kriz Journal, 5*, 37-42.
23. Gould, M. S., & Kramer, R. A. (2001). Youth suicide prevention,. *31*, 6-31.
24. Gulec, G., & Aksaray, G. (2006). An analysis of socio-demographic, socio-cultural and familial characteristics of young persons who attempt suicide.*New Symposium Journal,, 44*(3), 141-150.
25. Herrmann, D. S., & McWhirter, J. J. (2003). Anger & aggression management in young adolescents: An experimental validation of the SCARE program. *Education and Treatment of Children*, 273-302.
26. Odag, C. (Ed.). (2008). *Suicide (Ozkiyim) Description-Theory-Therapy.New Mental Reconstruction,* (3 ed.). İzmir: Odag Psikanaliz ve Psikoterapi Egitim Hizmetleri Yayinlari.
27. Oto, R., Ozkan, M., & Altindag, A. (2004). Suicides in Batman. Clinics in Turkey. *Journal of Psychiatry- Special Topics, 5*(2), 74-100.
28. Owens, D., Horrocks, J., & House, A. (2002). Fatal ad nonfatal repetition of self-harm. . *The British Journal of Psychiatry, 181*, 183-189.
29. Ozguven, H. D., Soykan, Ç., Haran, S., & Gencoz, T. (2003). The importance of problem solving skills and perceived social support as well as depression and anxiety symptoms in suicide attempts. *Turkish Psychology Journal, 18*, 1-11.
30. Sahin, H., Onur, A., & Basim, H. (2008). Predicting the Suicide Probability by Anger, Impulsiveness and Deficiency in Problem Solving Skills. *Turkish Psychology Journal, 23* (62), 79-88.
31. Sayil, I., Berksun, O. E., Palabiyikoglu, R., Ozguven, H., Soykan, C., & Haran, S. (2000). Crisis and Intervention in Crisis: Suicide Behavior. *Ankara University Psychiatric Crisis Research and Implementation Center Publishing,, 6*, 165-197.
32. Sayil, I., Oral, A., Guney, S., Ayhan, N., Ayhan, O., & Devrimci, H. (1993). A study on the suicide attempts in Ankara. *Kriz Journal, 1*, 56-61.
33. Starner, T., & Peters, R. (2004). Anger expression and blood pressure in adolescents. *The Journal of School Nursing, 20*(6), 335-342.
34. Sudak, H. (Ed.). (2007). *Kaplan&Sadock's Comprehensive Textbook of Psychiatry.* (8 ed. Vol. 34). Ankara: Ankara Gunes Kitabevi Ltd. Sti.

35. Suominen, K., Isometsä, E., Suokas, J., Haukka, J., Achte, K., & Lönnqvist, J. (2004). Completed suicide after a suicide attempt: a 37-year follow-up study. *American Journal of Psychiatry, 161*(3), 562-563.
36. Tezcan, A., Oguzhanoglu, N., & Ulkeroglu, F. (1995). Suicide attempts in children and young people.*Kriz Journal, 3* (1- 2), 70-74. .
37. Tsai, S.-Y. M., Kuo, C.-J., Chen, C.-C., & Lee, H.-C. (2002). Risk factors for completed suicide in bipolar disorder. *Journal of Clinical Psychiatry*.
38. Tsirigotis, K., Gruszczynski, W., & Tsirigotis-Woloszczak, M. (2011). Gender differentiation in methods of suicide attempts. *Annals of Transplantation, 17*(8), PH65-PH70.
39. Turkcapar, H., Guriz, O., Ozel, A., Isik, B., & Donbak Orsel, I. (2004). The correlation between anger and depression in patients with antisocial personality disorder. *Turkish Psychiatry Journal., 15*, 119 -124.
40. Turkish Statistics Institutions (2014) Statistics of Suicide, Available from: www.tuik.gov.tr.
41. Wolf, K. A., & Foshee, V. A. (2003). Family violence, anger expression styles, and adolescent dating violence. *Journal of Family Violence, 18*(6), 309-316.
42. World Health Organization. 2014. Preventing Suicide: A Global Imperative, Available from: http://www.who.int/mental_health/suicide-prevention/world_report_2014/en/