

Analysis of Patients Followed-up at the Emergency Internal Medicine Outpatients Department of Gulhane Military Hospital in 2003 for Suicide Attempt

Mehmet Cetin¹, Yusuf Ziya Turk², Mustafa Ozer³,
Turker Turker⁴, Bilal Bakir⁵

ABSTRACT

Objective: To retrospectively evaluate the suicide attempt cases monitored and treated at a training hospitals emergency medicine department internal medicine clinic.

Methodology: A total of 151 cases were monitored and treated for a suicide attempt between January 1, 2003 and December 31, 2003. Cases were evaluated for sociodemographic characteristics, diagnoses made, suicide method used and time of suicide attempts and for significant relations between these variables.

Results: Of the study group, 59.6% were male, 70.2% were single, 60.3% were retired or unemployed, 51.75% were privates (Non Professional Soldiers) and 36.4% were high school graduates. The mean age was 27.36 ±11 for the females and 22.27 ± 4.56 for the males. No diagnosis was made in 54.3% of the cases while 25.2% had depressive disorder and 14.6% had antisocial personality disorder. Antidepressants made up 27.8% and nonsteroidal anti-inflammatory drugs 21.2% of the drugs taken for suicide.

Conclusion: Suicide is an increasing health problem in Turkey. Establishing a suicide surveillance program based on technology provides collection of detailed and standardized data. Analyzing this data will improve effective suicide prevention efforts.

KEY WORDS: Suicide, Military Hospital, Emergency Service.

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1. Mehmet Cetin, MD, Assistant Professor, Dept. of Military Medical Health Services.
2. Yusuf Ziya Turk, PhD, MD, Department of Military Medical Health Services.
3. Mustafa Ozer, MD, Associate Professor, Dept. of Military Medical Health Services.
4. Turker Turker, MD, Department of Public Health.
5. Bilal Bakir, MD, Associate Professor, Dept. of Public Health.
- 1-5: Gulhane Military Medical Academy, Etilik, Ankara 06018, Turkey.

Correspondence:

Mehmet Cetin,
Assistant Professor,
E-mail: mcetin@gata.edu.tr, mcetin6457@gmail.com

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INTRODUCTION

Suicidal behavior is defined as a person's violence against himself/herself is an important public health problem with no clear theories to explain it. World Health Organization (WHO) states the average annual number of suicides as 16 per 100,000 globally. In other terms, while one dies every 40 seconds by suicide, someone attempts suicide every three seconds.¹ Although there are many social and medical interventions to decrease death or injury due to suicide, preventive measures against suicide differ between communities.¹ Suicide is generally a conscious violence of the individual against himself/herself and the individual aims to exterminate himself/herself with this action. Approximately a million persons have died due to suicide in 2000 and

the number of suicide attempts is 15-20 times this number.² According to WHO estimates for the year 2020, approximately 1.53 million people will die from suicide, and 10-20 times more people than this will attempt suicide worldwide. This represents on average one death every 20 seconds and one attempt every 1-2 seconds.³

The chosen method of suicide differs between countries and is usually toxic substance ingestion, firearm usage, hanging and jumping from heights. The 1995-2000 data of the State Statistics Institute for Turkey gives suicides with drugs or chemical substances at third place, after hanging and firearm usage.⁴ Some demographic characteristics such as age and gender are also known to influence suicidal behaviour. The State Statistics Agency data state that more than half of the males attempting suicide are younger than 35 while more than half of the women are younger than 25 years old.⁵

The aim of this study was to evaluate the data of patients attempting suicide by ingesting toxic substances and brought to the Emergency Internal Medicine clinic of Gulhane Military Medical Academy (GATA), a hospital that reflects on the health status of all the armed forces in Turkey.

METHODOLOGY

The study was planned to evaluate suicide attempt cases monitored and treated at GATA Emergency Medicine Department, Internal Medicine Clinic between January 1, 2003 and December 31, 2003. GATA hospital serves all military personnel in Ankara and also civilians presenting at the emergency department. The study consisted of all 151 records during the given period and from those, only 13 cases were hospitalized in Psychiatry service for further treatment while other 138 cases were discharged after stabilization and no mortality was recorded. According to the general procedure for the evaluation of suicide cases at GATA hospital, the initial treatment for saving life of the case like gastric lavage is applied immediately.

This was a descriptive study. The data were obtained from the registries of Emergency Internal Medicine Clinic according to a structured information form prepared by reviewing the relevant articles. However, records lacked some important information for the evaluation of suicidal attempt like religion. The study was planned believing that the evaluation of suicide attempts would provide data on for future studies.

RESULTS

Table-I present the general sociodemographic characteristics of the study group. Of the study group, 59.6% were male, 70.2% were single, 60.3% were retired or unemployed, 51.75% were privates (nonprofessional soldiers) and 36.4% were high school graduates. When the distribution of age groups by gender was evaluated, 87.7% of males attempting suicide were 14-24 years old while the female rate for the same age group was 47.5%. When marital status was checked, 49.2% of the females attempting suicide were married while 85.6% of the males attempting suicide were single. The mean age was 27.36 ± 11 for the females and 22.27 ± 4.56 for the males with the difference statistically significant ($p < 0.05$).

The diagnoses of the cases are presented in Table-II. No diagnosis was present or inadequate information had been entered into the file for 54.3% of the cases. Of patients with a diagnosis in the file, 2.2% had depressive disorder and 14.6% had antisocial personality disorder.

The toxic substances used by the cases have been presented in Table-III. Antidepressants were used by 27.8%, nonsteroidal anti-inflammatory drugs (NSAIDs) by 21.2% and more than one medication in 19.9%.

Table-IV presents the seasonal distribution of the suicide cases with psychiatric diagnoses. Suicide-related depressive disorders were seen most commonly during the summer (36.8) while anxiety disorders were more common during the fall (23.7%).

DISCUSSION

Suicide cases have increased 60% globally in the last 45 years. Suicide is one the three most common causes of death in the 15 to 45-year-old age group and suicide attempts have not been included in this number.⁶ Turkish statistics show a significant increase in suicide over the years. The State Statistics Agency data show that the rate has increased from 1.92 per 100,000 in 1987 to 2.42 in 1990 and 3.30 in 1997.⁷ Although there are intercultural differences, the problem of suicidal behaviour is one of the main public health problems in many countries.⁸ The country with the highest rate of suicide is Lithuania [75.6 per 100,000 for males and 16.1 per 100,000 for females] while the Russian Federation takes second place [70.6 per 100,000 for males and 11.9 for females].⁸

The traditions, values and way of life in different communities influence the suicide rate. In countries

Table-I: General Sociodemographic Characteristics of the Study Group.

Sociodemographic Variables		Female		Male		Total	
		No.	%	No.	%	No.	%
Age	14-24 years	29	47.5	79	87.7	108	71.5
	25-34 years	22	36.1	7	7.8	29	19.2
	35 years and over	10	16.4	4	4.4	14	9.3
Marital Status	Single	29	47.5	77	85.6	106	70.2
	Married	30	49.2	13	15.4	43	28.5
	Divorced	2	3.3	0	0	2	1.3
Occupation	Physician/Engineer	0	0	1	1.1	1	0.7
	Manager/Director	0	0	1	1.1	1	0.7
	Civil Servant/Accountant	10	16.4	7	7.8	17	11.3
	Self-Employed	2	3.3	23	25.6	25	16.6
	Tailor/Hairdresser	0	0	2	2.2	2	1.3
	Worker/Salesperson	1	1.6	13	14.4	14	9.3
	Retired/Unemployed	48	78.7	43	47.8	91	60.3
Educational Status	Illiterate	1	1.6	2	2.2	3	2.0
	Primary School	8	13.1	36	40.0	44	29.1
	Secondary School	7	11.5	13	14.4	20	13.2
	High School	30	49.2	25	27.8	55	36.4
	University	11	18.0	9	10.0	20	13.2
Rank	Unknown	4	6.6	5	5.6	9	6.0
	Officer	2	2.2	1	1.6	3	2.0
	Non-commissioned of. Private	3	3.3	2	3.3	5	3.3
	Non military official	77	85.6	0	0	78	51.7
	Family of officers	3	3.3	11	18.0	14	9.3
	Family of noncommissioned of. Family of nonmilitary official	1	1.1	12	19.7	13	8.6
	Family of nonmilitary official	1	1.1	25	41.0	26	17.2
	Family of nonmilitary official	3	3.3	7	11.5	9	6.0
	Family of veterans civilians	0	0	2	3.3	2	1.3
		0	0	1	1.6	1	0.7

where interpersonal competition is extensive, the disrupted relationship between the individual and the community increases the suicide rate. Similarly, suicides are quite common in traditional countries where the individual is rigidly controlled by the community. Another factor is the reaction of the community to suicide. Traditional countries like Japan where suicide is seen as honourable behavior have a high rate of suicide, supporting this notion. On the contrary, Islamic belief prohibits suicide by considering it as a murder. Although there was no information on religion in the registries almost all cases can be considered as Muslims. But adherence to Islamic principles and practices vary widely among Turkish population mainly due to influence of European culture.

Problems with inadequate data are quite common in studies regarding suicide.⁸ Since suicide can be influenced by legal, ethical or cultural taboos in some communities hence it may not be possible to correctly determine the cause of death.⁹ As a result of our study, we felt that standard forms that contain practical and important information for every patient

presenting at the emergency service of military hospitals should be developed and used.

We did not come across any studies on the suicide rate among military staff in Turkey. A study on Italian Army staff in 1998 reported a suicide rate of 1.1 per 100,000 and this was lower than the rate in the general community in Italy.¹⁰ Mediterranean countries have the lowest suicide rate in the world¹ and this geographical factor may also influence our low rate of suicide compared to other countries. However, this rate is expected to increase taking into account the changing sociocultural structure and economic developments in Turkey.

The male and female percentages for our cases were 59.6% and 40.4% respectively. Global data show that the lifelong suicide risk is 2-4 times higher in men than women while suicide attempts are 3-9 times higher in women.¹¹ However; women have a higher rate of successful suicide than men in China. The higher global successful suicide rate of men may be due to easier access to more lethal and violent methods and less reluctance in using them.¹ Studies from various cities in Turkey show a marked difference

Table-II: Definable Diagnoses of the Cases.

<i>Diagnosis</i>	<i>No.</i>	<i>%</i>
Depressive Disorder	38	25.2
Antisocial Personality Disorder	22	14.6
Mania	1	0.7
Delirium	1	0.7
Neurotik Disorder	2	1.3
Substance Abuse	2	1.3
Anxiety	3	2.0
No Diagnosis	82	54.3
Total	151	100.0

in suicide attempt rates between men and women. A study from Sivas reports the rate of female suicides among all suicides as 59.9%,¹² while this rate is 67.6% in a similar study from Konya,¹³ and 77.9% in a study from Samsun.¹⁴ The study from Trabzon by Gunduz et al. on patients presenting at the emergency service due to suicide attempt by poisoning found a female/male ratio of 3.41.¹⁵ Similar studies from other cities have reported a high female/male suicide rate, possibly due to the lack of financial independence for women in our country and other sociocultural factors. The high suicide attempt rate in males in our study can be explained by the fact that only males are subject to compulsory military service in our country and military hospitals therefore mostly cater to this population.

The mean age of the males with attempted suicide in our study was 22.27±4.56, while this value was 27.36±11 for the females and the difference was statistically significant ($p < 0.001$). A study by Wunderlich et al has reported a lower age for females with suicide attempts. It has been reported that only females aged 14-17 had a higher suicide rate whereas there was no gender difference for the group aged 22-24.¹¹ The study by Tountas et al. has reported the average age for females as 29.82 and for males as 33.09 while these rates are 20 and 29 respectively for the Kocak et al study and 22.7 and 26.7 for the Gunduz et al study.¹⁵⁻¹⁷ The reason for the younger mean age in our group may be that most of the popu-

Table-III: Toxic Substances Used by the Cases.

<i>Substance</i>	<i>No.</i>	<i>%</i>
NSAID	32	21.2
Antidepressant	42	27.8
Anxiolytic	12	7.9
Multiple Drugs	30	19.9
Others	35	23.2
Total	151	100.0

lation served by our hospital consists of soldiers aged 19-20.

Another sociodemographic characteristic thought to influence suicidal behaviour is marital status. The suicide risk is higher in single and divorced persons compared to married persons. Marriage is thought to be a suicide-preventing factor, especially for men.¹⁸ Gunduz et al have reported a married men rate of 55.5% and married women rate of 48.5% in their study.¹⁵ We did not observe a significant difference between the marriage rates of women in our study but the rate of suicide attempts was higher for single men, probably because the study population mostly consisted of single men aged 19-20.

Looking at the time of day the suicide was attempted, the 08:00-24:00 hours were most commonly used with 19:00-20:00 the most frequent. A similar study by Partonen et al. has shown that suicide cases peak later during the day.¹⁹ We did not find a significant result from our comparison to determine whether the seasonal distribution of the cases was statistically significant.

One of the most important risk factors for suicide and suicide attempts is the presence of a psychiatric disorder. Depression, anxiety disorders, alcohol and substance abuse and eating disorder and previous suicide attempts are the main factors.²⁰ More than 90% of suicide cases are in those with a diagnosable psychiatric disease, generally depression and/or substance abuse.²¹ We found a diagnosable psychiatric disorder in 45.7% of our cases with depressive disorder at 25.2% and antisocial personality disorder in 14.6% of the files with diagnoses.

Table-IV: Seasonal Distribution of Suicide Cases with Psychiatric Diagnoses.

<i>Diagnosis</i>	<i>Season</i>							
	<i>Winter</i>		<i>Spring</i>		<i>Summer</i>		<i>Fall</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Depressive Disorder	8	21.6	10	26.3	14	36.8	6	15.8
Anxiety	4	10.8	4	10.5	5	13.2	9	23.7
Others	25	67.6	24	63.2	19	50.0	23	60.5
Total	37	100	38	100	38	100	38	100

Of the 151 cases evaluated, 143 (94.7%) had attempted suicide by drug ingestion and seven (4.6%) by chemical substance ingestion while the method was unknown in one patient. When we checked the types of toxic substances used for suicide, antidepressants were the most common in this study with 27.8%, followed by NSAIDs with 21.2%. Psychiatric medication usage for suicide was seen in 40% while multiple drug use was present in 19.9% of our cases. A similar study by Gunduz et al has reported that suicide attempts are usually carried out with analgesics, followed by antidepressants and that multiple medicine usage was present in 46.9%.¹⁵

CONCLUSION

Suicide is an increasing health problem in Turkey and will continue to be so in the upcoming years. We therefore need to improve data collection and analysis that are considered two critical components of suicide prevention efforts. A suicide surveillance program based on technology could collect detailed and standardized data on suicide.

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