

DETERMINATION OF SOCIODEMOGRAPHIC CHARACTERISTICS AND ETIOLOGICAL FACTORS OF SUICIDE ATTEMPTERS

Fatih Yagmur¹, Cavusoglu M², Ramazan Karanfil³, Hasan Din⁴

ABSTRACT

Objectives: To investigate the demographic and socio-cultural properties, as well as the etiological factors in suicide attempters in Turkey.

Methodology: A standard questionnaire form was used to collect information on gender, age, education level, employment status, marital status, method and reason of the suicidal attempt, prior suicidal attempts, psychiatric diagnosis, family history of psychiatric disorders and the season. Eleven hundred twenty (1120) suicide attempters who were admitted to the Emergency Department of Kayseri Training and Research Hospital, between 1 June 2006 and 31 December 2006, were enrolled in this study.

Results: Suicide attempts were mostly observed in females (81%, $p < 0.005$), and in the age range of 15-24 years (64.6%, $p = 0.300$). The highest rate of suicide attempts were observed in patients with primary school education (59.8%, $p = 0.424$), in housewives ($p < 0.001$), and in married women ($p = 0.001$). The most common method used to attempt suicide was intoxication (99.1%, $p = 0.345$) and the most common cause of suicide attempts was family problems (43.5%, $p = 0.001$). The most important risk factors for suicidal ideation were the presence of a previous psychiatric disorders ($p < 0.003$) and a family history of psychiatric disorders ($p < 0.001$).

Conclusion: Suicidal attempts must be carefully evaluated in subjects with previous psychiatric disorders, and a family history of psychiatric disorders.

KEY WORDS: Demographic Factors; Etiology; Suicide, Attempted.

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1. Fatih Yagmur MD, Dept. of Forensic Medicine, Medical Faculty, Erciyes University, Kayseri - Turkey.
2. Cavusoglu M, MD, Kayseri Training and Research Hospital, Emergency Department, Kayseri -Turkey
3. Ramazan Karanfil, MD, Department of Forensic Medicine, Medical Faculty, Sutcu Imam University, Kahramanmaras - Turkey
4. Hasan Din, MD, Branch Office Manager of Forensic Medicine, Turkey.

Correspondence:
Dr. Fatih Yagmur,
Erciyes University, Medical Faculty
Department of Forensic Medicine,
38039-Talas-Kayseri, Turkey.
E-mail: fyagmur38@yahoo.com

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INTRODUCTION

Suicides and suicidal attempts are considered among the major socio-medical problems in Turkey and worldwide.¹ According to the World Health Organization (WHO) data, suicide is among the 10 most common causes of death, and accounts for approximately 0.9% of all deaths.^{2,3} Suicide attempt, defined as a self-injurious behavior with non-fatal outcome, is a major problem in emergency departments. It is very difficult to understand the seriousness of individuals who present to the emergency departments with suicide attempts; and, previous suicide attempts may eventuate in

completed suicides in future.⁴ Various factors are involved in suicidal ideations and suicide attempts, such as stressful life style, economic and social problems, family factors (divided families, abuse, lack of communication, attachment disorders, psychopathology in the family members, and relationship disorders), psychiatric diseases, psychological factors, biological predisposition, genetic predisposition, physical disease, and sociodemographic features.^{1,5-7}

The aim of the present study was to determine the sociodemographic characteristics and etiologic factors in suicide attempters who were admitted to the emergency department of a training and research hospital.

METHODOLOGY

The study group included 1120 (211 males and, 909 females) suicide attempters who were admitted to the Emergency Department of Kayseri Training and Research Hospital, between June 1st 2006 and 31 December 2006. The protocol of the study was approved by the local Ethics Committee. The questionnaire was administered, face-to-face, to the individual accompanying the patient. The questionnaire is presented in Form 1.

Statistical Analysis: Statistical analyses were performed using SPSS software package for Windows and the chi-square test was used for evaluation of data. The statistical significance level was determined to be $p < 0.05$.

RESULTS

The sociodemographic characteristics of the suicide attempters are presented in Table-I. The number of suicide attempts was higher in females ($p < 0.005$). Though the suicide attempts were primarily observed in the age range of 15-24 years, no significant difference was present between the age groups ($p = 0.300$). With respect to educational level, the highest frequency of suicide attempts was detected among primary school graduates, and the lowest frequency was observed among illiterates; however, no significant difference was present between the groups ($p = 0.424$). Evaluation of

suicide attempts with respect to employment status demonstrated that suicidal attempts were most prevalent among housewives, while retired men were the least likely to attempt suicide ($p < 0.001$). Based on marital status, the rate of suicide attempts was significantly higher in married women ($p = 0.001$). Intoxication was the mostly preferred method for attempting suicide; however, no significant difference was observed between the groups ($p = 0.345$).

Form 1: Questionnaire Form	
Date:	
1. Name:	
2. Gender:	
<input type="checkbox"/> Male	<input type="checkbox"/> Female
3. Age:	
4. Education	
<input type="checkbox"/> Illiterate	<input type="checkbox"/> Primary
<input type="checkbox"/> High-school	<input type="checkbox"/> University
5. Employment	
<input type="checkbox"/> Employed	<input type="checkbox"/> Unemployed
<input type="checkbox"/> Student	<input type="checkbox"/> Retired
<input type="checkbox"/> Housewife	
6. Marital Status	
<input type="checkbox"/> Married	<input type="checkbox"/> Divorced
<input type="checkbox"/> Single	<input type="checkbox"/> Other
7. Suicidal attempts method	
<input type="checkbox"/> Intoxication	<input type="checkbox"/> Jumping
<input type="checkbox"/> Cutting/ perforating tool	<input type="checkbox"/> Gas
8. Suicidal attempts reason	
<input type="checkbox"/> Domestic	<input type="checkbox"/> Economic
<input type="checkbox"/> Psychologic	<input type="checkbox"/> Somatic
<input type="checkbox"/> Other	
9. Prior suicidal attempts	
<input type="checkbox"/> Yes	<input type="checkbox"/> No
10. Psychiatric diagnose	
<input type="checkbox"/> Yes	<input type="checkbox"/> No
11. Psychiatric diagnose in family	
<input type="checkbox"/> Yes	<input type="checkbox"/> No
12. Climate	
<input type="checkbox"/> Spring	<input type="checkbox"/> Summer
<input type="checkbox"/> Fall	<input type="checkbox"/> Winter

Table-I: Sociodemographic characteristics and etiologic factors in suicidal attempters

<i>Characteristics</i>	<i>Male n (%)</i>	<i>Female n (%)</i> (% = n/1120)	<i>Total (%)</i>	<i>p</i>
Gender	211 (19)	909 (81)	1120 (100)	0.005
<i>Age range (years)</i>				
15-24 years	131 (18)	593 (82)	724 (64.6)	0.300
25-34 years	52 (18.8)	224 (81.2)	276 (24.6)	
35-49 years	21 (21.6)	76 (78.4)	97 (8.7)	
>50 years	7 (30)	16 (70)	23 (2)	
<i>Education</i>				
illiterate	5(10)	44 (90)	49 (4.3)	0.424
primary (0-8 years)	121 (18)	549 (82)	670 (59.8)	
high school (9-11 years)	70 (20.6)	269 (79.3)	339 (30.2)	
university (12-17 years)	75 (6.6)	47 (4.1)	62 (5.5)	
<i>Employment</i>				
employed	94 (45)	116 (55)	210 (18.7)	0.001
unemployed	70 (24)	220 (76)	290	
student	31((15)	176(85)	207	
retired man/ housewife	16(4)	396 (96)	412	
<i>Marital Status</i>				
married	79	448	527	0.001
divorced	2	42	44	
single	123	400	523	
other	7	21	26	
<i>Suicidal attempts method</i>				
intoxication	207 (18.6)	903 (81.4)	1110 (99.1)	0.345
jumping	2 (40)	3 (60)	5 (0.45)	
cutting/ perforating tool	1 (50)	1 (50)	2 (0.2)	
Gas	1	2	3 (0.2)	
<i>Suicidal attempts reason</i>				
domestic	74 (35.1)	413 (45.4)	487 (43.5)	0.001
economic	13 (6.2)	34 (3.7)	47 (4.1)	
psychologic	50 (23.7)	204 (22.4)	254 (22.6)	
somatic	11 (5.2)	65 (7.2)	76 (6.9)	
other	63 (29.8)	193 (21.3)	256 (22.8)	
<i>Prior suicidal attempts</i>				
yes	28(19)	116 (81)	144 (14)	0.550
no	183(19)	793(81)	966 (86)	
<i>Psychiatric diagnose</i>				
yes	34(18)	151(82)	185 (16.5)	0.003
no	177(19)	758(81)	935 (83.5)	
<i>Psychiatric diagnose in family</i>				
yes	1(7.1)	13(92.9)	14	0.001
no	210(19)	896(81)	1106	
<i>Climate</i>				
spring	63	258	321 (28.5)	0.638
summer	53	269	322 (29)	
fall	45	183	228 (20)	
	50	199	249 (22.5)	

The most frequent reason in suicidal attempts was family problems ($p=0.001$). The rate of suicidal attempts was lower in patients with a prior suicide attempt than patients who attempted suicide for the first time. Most of the patients had no psychiatric disorder diagnosis or a family history of a psychiatric disorder. The summer season was the time of year in which most suicide attempts occurred; however, the frequency of attempts in different seasons were similar ($p=0.638$).

DISCUSSION

In many studies conducted in Europe and North America, the rate of suicidal attempts has been found to be increased, especially in the Northern Europe countries (54-73/100,000). According to data from the Turkish Statistical Institute (TurkStat), the rate of suicidal attempts were lower in Turkey (2.5/100 000).

Gender: It is a globally-accepted fact that suicide attempts are higher among women compared to men.^{3,5,8-12} The results of the present study are consistent with this fact. Female/male ratio has been reported to be 5/1 in some of the studies.¹³ Studies conducted in Turkey have also demonstrated that the rate of suicide attempts was higher among women than men.¹³

Age: Studies have also demonstrated that suicide attempts are markedly higher in the age range of 15-24-years.¹³ Studies conducted, by the support of WHO, in South Asia and European countries demonstrated that suicide attempts were higher among young women in the 15-24-year age group.¹⁴ In the present study, the rate of suicide attempts was consistent with the literature, with respect to both gender (women) and age group (15-24 years). In a multi-centered study conducted in Europe, suicidal attempts were observed to be higher in younger ages, especially in the 15-24 year age group⁴, whereas suicide rates were higher among the elderly.⁵ It has been suggested that individuals who have attempted suicide once are prone to completing their unfinished attempts later on in their lives.⁴⁻⁷

Methods of Suicidal attempts: The most commonly used method of suicide attempts in

both genders was drug intoxication.^{3,15,16} Studies in the literature have demonstrated that intoxication, which was referred to as the "soft method", was the most common method used in suicide attempts.¹⁷⁻¹⁹ In a study conducted in Turkey by Tuzun *et al.*¹, intoxication was reported as the most common method of suicide attempts (82.8%), as in the present study (99.1%).

Reasons of suicidal attempts: The underlying causes of suicide attempts are numerous. Family problems have been reported to be the most common risk factor, followed by psychiatric disorders in many studies.²⁰⁻²³ Similarly, in the present study the rate of family problems was the most frequent underlying cause (47.2%), followed by psychiatric disorders (22.3%). As reported, psychiatric disorders or family problems, especially parent-child conflicts and family violence facilitate suicide attempts.^{21,22}

Prior suicidal attempts: It is known that 25% of suicidal attempts are repeated and 30% of these cases result in death.¹⁸ The rate of repeated suicide attempts has been reported to be 15% by Miranda R *et al.*²⁴ In a study conducted in Spain, the rate of suicide attempts which resulted in death was reported to increase with increasing age in both genders.⁵ The results reported herein demonstrated that 12.9% of the patients presented with a history of more than one suicide attempt, and that the second suicide attempts were largely observed among individuals in the group 35-49 years of age. Therefore, it is important to bear in mind that every suicide attempt may be repeated and may even result in death, and it should be considered that individuals with a history of suicide attempts are prone to repeating their attempts later on in their lives.

Psychiatric diagnosis: Artuner D *et al*³ have reported that 5.4% of the patients had a history of psychiatric disorder. In the present study, the rate was higher, 16.1% of men and 16.3% of women reported a history of psychiatric disorder. Totally, 16.5% of the subjects reported a history of psychiatric disorder and 52.1% of these individuals have previously attempted suicide, which was a statistically significant

outcome. Studies in the literature reported that the rate of suicide attempts was higher among individuals with a history of psychiatric disorder.^{1,4,5,16,25}

Psychiatric disorder in the family: In the current study, a family history of psychiatric disorder was present in 4.3% of men and 4.6% of women. Among these patients, 42.9% had a history of more than one suicide attempt. In another study, the rate of psychiatric disorder in the family among those who had attempted suicide was reported to be 4.8%³, whereas it was reported to be 1.2% in the present study.

Education: The highest rate of suicide attempts was among the individuals with primary school education (59.8%), while the lowest rate was among illiterates (4.4%). Studies conducted in Turkey and in other countries demonstrated that suicidal attempts were more common among individuals with a lower level of education.^{1,3,26-28}

Climate: Suicide attempts were most frequent during the summer season (29%). The following factors were associated with suicide attempts in various studies stressful life style, economic and social problems, family factors (divided families, abuse, lack of communication, attachment disorders, psychopathology in the family, and relationship disorders), psychiatric diseases, psychological reasons, biological predisposition, genetic predisposition, physical diseases, and sociodemographic features.^{1,5,7}

Marital status: In the present study, 47.1% of the subjects were married and 46.7% were single. It was determined that 58.3% of the men were single, whereas 49.3% of the women were married (p=0.001).

Employment: The highest rates of suicide attempts were reported among housewives (p=0.001).

CONCLUSION

According to our findings, female gender, younger age, lower education levels (primary school), being a housewife, being married and family problems are among the most important characteristics of individuals who attempted

suicide. Additionally the summer season was the time of the year that most suicide attempts took place. Suicide attempts must be carefully evaluated in subjects with previous psychiatric disorders and a family history of psychiatric disorders. Drug intoxication is the mostly preferred method in suicide attempts. Individuals with the aforementioned characteristics should carefully be evaluated, and the sociodemographic features and etiologic factors in these individuals should be investigated.

Authors Contributions: Fatih Yagmur was responsible for conception, design, analysis and interpretation of data and the final approval of the version to be published. Fatih Yagmur, Mustafa Cavusoglu, Ramazan Karanfil, Hasan Din were responsible for drafting the article and revising it critically for important intellectual contents.

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