

Does Suicide Attempt Age Increase?

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ABSTRACT

Does suicide attempt age increase?

Aims: Evaluation of sociodemographic characteristics of patients hospitalized due to attempted suicide by poisoning in Fatih Sultan Mehmet Education and Research Hospital Anesthesiology and Reanimation Clinic, between February 2007 - January 2010.

Method: Patients hospitalized in the anesthesiology and reanimation clinic due to attempted suicide by poisoning between February 2007 - January 2010 were reviewed retrospectively. The results were classified according to the sociodemographic characteristics.

Results: The number of the patients who were accepted into our clinic was 2550; 540 (21.76%) of them had been hospitalized due to intoxication, and 474 of 540 (87.7%) were suicide attempts. The proportion of female patients was 76.16% (n=361), whereas the proportion of male patients was 23.83% (n=113). The number of patients older than 40 years was 66 (13.92%). In younger patients, the number of suicide attempts were significantly higher in female patients than male patients, whereas in patients older than 40 years, the number and the ratio were similar. Rate of suicide attempts were highest in June, July and October, and lowest in January.

Conclusion: It seems that the mean age of suicide attempt has a trend of increase. Female/male proportion approached each other with increasing age and attempted suicide by poisoning was more frequent in some months. The findings must be supported by prospective multicenter studies.

Key words: Intensive care, suicide attempts, demographic data

ÖZET

Özkiyim yaşı yükseliyor mu?

Amaç: Anesteziyoloji ve reanimasyon kliniğine Şubat 2007 - Ocak 2010 tarihleri arasında entoksikasyon yoluyla özkıyım girişimleri nedeniyle yatan hastaların sosyodemografik özelliklerinin değerlendirilmesi.

Yöntem: Fatih Sultan Mehmet Eğitim ve Araştırma Hastanesi Anesteziyoloji ve Reanimasyon Kliniğine, Şubat 2007 - Ocak 2010 tarihleri arasında entoksikasyon yoluyla özkıyım girişimleri nedeniyle yatan hastaların dosyaları geriye dönük olarak tarandı. Sonuçlar sınıflandırıldı, gruplar oluşturuldu.

Bulgular: Yoğun bakım kliniğimize kabul edilen 2550 hastanın 540'ının (%21.8) yatışı entoksikasyon nedeniyle yapılmıştı. Bunların 474'ü (%87.7) özkıyım amaçlı idi. Kadın hasta sayısı 361 (%76.16), erkek hasta sayısı 113 (%23.83) idi. Özkıyım amaçlı entoksikasyon hastalarının 66'sı (%13.92) 40 yaşın üstündeydi. Genç yaş gruplarında kadın sayısı erkeklerden yüksekken, 40 yaş üstü hastalarımızda sayı ve oran birbirine yaklaşmakta idi. Çalışmamızda entoksikasyon yöntemi ile özkıyım girişim oranlarının haziran, temmuz, ekim aylarında en yüksek, ocak ayında da en az olduğu gözlemlendi.

Sonuç: Özkıyım girişiminde yaş ortalamasının yükselme eğiliminde olduğu, kadın/erkek oranının birbirine yaklaştığı ve bazı aylarda entoksikasyon ile özkıyım girişiminin daha çok olduğu görüldü. Çalışmanın bulgularının çok merkezli ileriye dönük yeni araştırmalarla desteklenmesi gerekmektedir.

Anahtar kelimeler: Yoğun bakım, özkıyım girişimleri, demografik veriler

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INTRODUCTION

Suicidal behavior is terminating one's his/her own life voluntarily and consists of three components: suicidal idea, suicide attempt and suicide (1). Suicidal behavior has been regarded as an important public health problem in recent years (2). Suicide attempt is an action triggered by life events and traumas, occurs as a

response to stress and can be defined as individual's call for help or indication of hopelessness and desperation (3). In many countries, suicide is among the first ten causes of death in all age groups (4). Although this rate is not as high as other countries, suicide rates are increasing in our country as well (5).

All patients admitted to our hospital due to suicide attempt—whether they have a vital risk or not— are

followed-up. In recent years, both increase in the number of patients attempting suicide and increasing mean age of attempters attracted our attention. In this retrospective study, we aimed to evaluate patients followed-up after suicide attempt between February 2007 and January 2010 according to their demographic characteristics.

METHODS

Data from files of patients admitted to Fatih Sultan Mehmet Training and Research Hospital, Department of Anesthesiology and Reanimation between February 2007 and January 2010 for suicidal attempt due to intoxication were collected retrospectively by using our hospital's automation software. Age, gender, residential area, month of suicide, history of previous treatment and number of suicidal attempts were all recorded. All of our patients were consulted by our staff psychiatrist before discharge. Numbers of patients who do not have a psychiatric consultation note and who were sent to an inpatient psychiatry clinic were also recorded. Patients over 40 years of age were called by phone and their educational levels, professions and reasons of suicide were asked.

Statistical Analysis

Data were analyzed by SPSS 15.0 for Windows software. For the assessment of mean ages by years one-way analysis of variance, for the assessment of mean age of suicide of women and men student's t-test and to assess relationship between categorical variables chi-square test was used. Level of significance was

taken as $p < 0.05$ at all statistical analyses.

RESULTS

Out of 2550 patients admitted to our intensive care unit, 540 (21.8%) were admitted due to intoxication. Four hundred and seventy-four of them (87.8%) were suicidal attempts and except for one patient, all of them attempted suicide by using drugs. According to psychiatric consultation notes of our patients, three of them were sent to the nearest inpatient psychiatry clinic for further treatment and others were recommended outpatient follow-up for depression. Forty-eight patients were not consulted by psychiatrist.

76.2% (n=361) of 474 patients who were included in the study were women and 23.8% (n=113) were men (women/men=3.19). Eighty-four patients were admitted between March and December 2007, 141 patients were admitted between January and December 2008 and 249 patients were admitted between January and December 2009. Age, gender and mean ages of female, male and all patients who were included in our study are shown in Table 1 (Table 1).

Sixty-six patients (13.9%) were over 40 years of age and 57.5% (n=38) were women and 42.4% were men (women/men=1.35). Sixteen of these 66 patients (24.2%) were being treated for depression for 1-8 years. Educational level, marital status, profession and history of psychiatric disease of forty-four patients (66.6%) from over 40 age group whom could be contacted by phone and re-examined were recorded (Table 2). Eighty-one percent of the patients were married. Sixty-eight percent were primary school, 13.6% were secondary school, 13.6% were high school and 4.5% were

Table 1: Age and gender distribution and mean ages of patients

YEAR	Age							Mean Age					
	13-20	21-30	31-40	41-50	51-60	61-70	71	Female Patients	Male Patients	W / M Ratio	Women	Men	General
2007	27 K	27 K	12 K	4 K				70	14	5	24.9	28.64	25.35
March-December	3 E	6 E	3 E	2 E				(%83.3)	(%16.7)				
2008	39 K	42 K	17 K	8 K	2 K			108	33	3.27	25.47	29.15	26.33
January-December	8 E	11 E	7 E	7 E				(%76.6)	(%23.4)				
2009	69 K	66 K	23 K	17 K	2 K	3 K	2 K	183	66	2.77	26.7	33.5	28.51
January-December	17 E	17 E	13 E	9 E	5 E	4 E	1 E	(%73.5)	(%26.5)				

W/M, Women/Men

Table 2: Demographic characteristics of patients over 40 years of age

GROUPS	Gender		Marital Status			Educational Level			Profession		History of Depression (+)
	W	M	Married	Divorced	Single	Prim.	High Sch.	Univ.	Yes	No	
40-50 yrs old	31	27	25	5	3	28	4	1	13	19	12
51-65 yrs old	6	7	9	0	0	6	3	1	8	1	4
65 yrs old and over	1	2	1	0	0	10	0	0	1	1	0

Prim.= Primary school; Univ.=University and over

Table 3: Patient distribution according to months

MONTH	2007	2008	2009	Total
January			10	10 (2.16%)
February	6	2	21	29 (6.26%)
March	6	4	11	21 (4.54%)
April	5	13	23	41 (8.86%)
May	6	23	18	47 (10.15%)
June	7	28	23	58 (12.53%)
July	11	16	27	54 (11.66%)
August	1	14	24	39 (8.42%)
September	10	9	16	35 (7.56%)
October	10	17	25	52 (11.23%)
November	10	8	22	40 (8.64%)
December	10	7	20	37 (7.99%)

university graduates. Forty-one percent were housewives and 27.3% were pensioners. Unemployed rate was 4.5%. From patients whom addresses could be found, 29.1% were living in residential areas with high socioeconomic level and 50.2% were living in residential areas with low socioeconomic level. Nine patients (10.3%) had chronic systemic disease.

In our study, relationship of suicide attempt with months was also investigated. Monthly distribution of suicide attempts are shown in Table 3 (Table 3). No time-related record was found in files of 11 patients so these patients were not included in this table. Suicidal

attempts occurred mostly in June (12.53%), July (11.66%) and October (11.23%). Lowest rate of suicidal attempts occurred in January (2.16%).

When mean ages of patients attempted suicide were compared according to years, mean number seen in 2009 was higher than 2007 ($p < 0.05$) (Table 4).

When mean suicide ages of female and male patients were compared, mean suicide age of women (25.85 ± 10.58) were found significantly lower than men (31.62 ± 13.58) ($p < 0.05$). Proportion of female patients 40 years of age or under and attempted suicide were found significantly higher than the proportion of male patients ($p < 0.001$) (Table 5).

DISCUSSION

Highest number of suicide attempts in our study was between 21 and 30 with 169 patients. After this, 13-20 age group came with 163 patients. According to State Statistics Institute (SSI) data (6) highest rate was in 15-24 age group. In higher age groups, there was no patient over 50 in 2007 but 2 suicide attempts were admitted from 55-60 age group in 2008; there was no patient over 61. However, there were 7 patients from

Table 4: Comparison of mean ages according to years

	2007 (n=84)	2008 (n=141)	2009 (n=249)	F	p
Age, Mean \pm SD	24.96 \pm 8.80	26.47 \pm 9.53	28.42 \pm 13.30	3.240	<0.05*

*One-way analysis of variance, $df=2,471$

Table 5: Mean suicide ages of women and men and comparison of distribution of suicidal attempts over and below the age of 40

	Women (n=361)	Men (n=113)	Statistical Test	p
Suicide age, Mean \pm SD	25.85 \pm 10.58	31.62 \pm 13.58	4.710*	<0.001
40 and below, n (%)	323 (79.2)	85 (20.8)	14.586**	<0.001
40 and over, n (%)	38 (57.6)	28 (42.4)		

*Student t test value, **Chi-square test value

61-70 age group and 3 patients over 71 in 2009. Suicidal attempts in higher age groups increased by years.

In an ecological analysis done between 1990 and 2005 in Quebec, Canada by Burrows (7), age groups were divided to 10–24, 25-44, 45–64 and over 65 and yearly intervals were determined as 1990–93, 1994–97, 1998–2001 and 2002–2005. By this method 162 communities were screened and highest suicidal attempt rates were observed in 25–44 age group. Although high rates were not observed in fourth decade in our country, increasing trend of mean age every other year gives a signal of increase in the near future.

Patients over 40 called by phone did not want to state a reason for their suicidal attempts and stated regret by saying “it happened once, it will not repeat”. Two housewives who were 62 and 63 years old were examined at the ward and told the reason of their suicidal attempt as bad straits and not being able to pay the rent and the reason of the suicidal attempt of a retired judge was the fear of chronic disease and future. Due to retrospective nature of our study, there was not any data directed towards reasons for each patient. Our patients are consulted by a psychiatrist upon discharge and this interview is only done for whether the patient will be followed-up on an outpatient basis or not. For this reason, our study lacks justification. In the study of Alptekin et al. (8), men mentioned psychological crisis, economic and family problems and women mentioned family problems, psychological crisis and health problems for justification.

Number of female patients in our study –although varied according to years- was always higher than men. In some studies, it was reported that suicidal thoughts are observed more in men than women but some other studies reported this proportion as equal (9-11). Findings from studies done in several countries showed that suicidal attempt is observed more in women than men (9,12-14). According to SSI data, suicidal attempt rates are twice as high as men but completed suicide rates are twice higher in men than women (6).

An interesting finding of our study was the marital status (79.54% married) of patients over 40. In the study of Fawcett and Shaughnessy (15) done in United States in 1989, it was proposed that marriage is a protective

shield and suicide rates are higher especially at single men. In several studies, it was found that suicidal tendency is higher in divorced, single, separated people or people living alone (9,16,17). In the study of Alptekin et al. (8) done at Adiyaman in 2006, rates in married women was found higher like in our study. Authors proposed that women who have more frail social position in the province generally were more influenced than men by changes occurred in the socio-cultural environment. In the study of Volant (18), it was stated that despair leading to weariness and suicidal tendency of women become increasingly seen in today’s societies. According to Volant, main reasons of despair among women are poverty and low educational level as well as disintegration with society. In the study of Şenol et al. (19), suicide rates among married women were found to be high. Contradiction of our results with data of United States may be due to socio-cultural differences between two societies.

In our study, suicidal attempts were highest in June, July and August and lowest in January. Low number of patients in January, February and March of 2008 and increase in the number of patients in the following May, June and July was of interest. In the study of Şenol et al. (19) done at Erciyes University, highest rate was found in July with 25%. In the study of Alptekin et al. (8) suicidal attempts were mostly seen in February (12.35%) and least in April (4.94%). In another study by Küçükler and Aksu (20), both fatal and non-fatal suicidal attempt rates were found highest in summer months and they proposed that by the increase of outdoor life in summer, suicidal acts can be realized easier. It is already known that suicidal behavior increases at the end of spring/ beginning of summer mainly in bipolar disorder (21). More than one variable can be observed which can cause this. There are researches which found correlation between low serum cholesterol levels and suicidal attempts (22,23). Seasonal variations of similar variables evaluated cross-sectionally may be effective in the increase of suicidal attempts in summer months. For example, in a recent study, significantly low HDL levels were found at all seasons except winter in patients with bipolar disorder (24). Similar physiological fluctuations may be effective on disease course and suicidal attempts.

High proportions of women and pensioners found in the study of Şenol et al. (19) are consistent with our study. Employment rate of 4.5% is lower than the rate of 23.6% found in the study of Şenol et al. This may be due to regional labor distribution and economic production of Istanbul and Kayseri. In a study by Iribaren et al. (25), no gender difference was found among cases of suicidal attempt with low educational levels. Low socioeconomic level, unsuccessful school life in adolescence and parents with low educational levels increase the rate of suicidal attempts. (26).

Investigating the reasons of increasing number of suicidal attempts by our changing socioeconomic

structure is important for preventive and therapeutic health care services (27). In a study done in state of Washington with a high number of participants, it was found that suicide was significantly higher in men than women (28) and young deaths were significantly higher than elderly deaths (29). Suicidal attempts after 40 and up to 80 years of age are important for the adult mental health of our society. Several previous studies showed that hospitalizations due to suicidal attempts are the most important messengers of completed suicidal acts (30). For this reason, there is a strong need for multi-center and prospective studies in wider communities.

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