

Epidemiological Survey of the Attempted Suicide Patients Admitted at Hazrat Rasoul Hospital in Tehran (2007-2011)



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Abstract : Suicide is one of the major problems in the modern world that calls for immediate need for its prevention. This study was an epidemiological survey of the attempted suicide patients admitted at Hazrat Rasoul Hospital in a five-year period from 2007-2011 in Tehran.

Methods:

In this cross-sectional study, the data on the 483 attempted suicide cases in 2007-2011 were collected from Hazrat Rasoul Hospital files. The data were gathered with a structured checklist and analyzed with SPSS 16 soft ware.

The results ranked of attempted suicide cases as 78.3% with no academic education, 72% below the range of 30 years of age, 64.8% were unmarried, amongst, 51.3% men and 32.9% housewives. Moreover, 40.7% of the cases have the history of mental illnesses with depression and schizophrenia having the highest rate of occurrence. Thirty-three percent of the suicides were attempted at night time, 69% on early weekdays, and 33.4% in winter. The rate of family struggles was the cause amongsts 48.9% cases while rate of 24.8% were for psychological disorders. Fifty-seven percent of the cases were due to the consumption or abused tablets. The most common methods of suicide (29.4%) tried to commit suicide by cutting their hand veins. Only 3% of the cases were reported dead. The present study suggests that Young, unmarried people, people with the history of psychological disorders and schizophrenia should be identified and preventive measures should be adopted.

Keyword: Suicide attempt, mental disorders, unsuccessful Suicide.

Introduction

Suicide refers to one of the common and preventable problems in advanced and developing countries, as an important health problem. According to estimates of the World Health Organization about 804,000 deaths have occurred due to suicide. 11.4 per 100,000 people (15 for men and 8 for women). Suicide is a multi factorial phenomenon and depends on local factors from country. Leu (2009) stated that it is a life-threatening behavior and at least 90 % fluctuations associate between countries. This phenomenon includes culture, politics, economy, religious beliefs, demographic characteristics, geographical features, status of mental health. (Shirzad and Gharedagh, 2007; Liu, 2009; Parker and Ben-Tovim, 2002; Runyan *et al.*, 2003; Vijayakumar *et al.*, 2008; Wu, *et al.*, 2012; Leu, 2009; Agerbo, *et al.*, 2002). Sheikholeslami, *et al.*, (2008) suggested *etioloical* pattern differs in different countries. For instance, in the rich countries, rate of male death due to suicide is three times more than women. However, in low and middle-income countries, deaths of men per woman are 1.5 (WHO, 2014). The rate is increasing in Muslim countries (Wu, *et al.*, 2012). Often suicides occur suddenly, but in majority cases addiction and mental healthy cause of suicides and in some progressive verbal talks and behavioral cues over time.

Therefore, it is necessary to find out the signs so that precautions of these causes will control suicide. In Iran, the suicide rate was 5.3 per 100 thousand people in 2012. The rate was 7 in men and 3.6 in women per 100 thousand population (WHO, 2014).

All suicides are not fatal, but it is necessary to identify and analyze the reasons which influence them. The study shows that 40 to 60 percent of those who committed suicide had previously had a history of suicide, among which 10 to 14 percent of cases have led to the death of them (Tejedor, 1999; Pajoumand, 2007; Mihandoost *et al.*, 2013). In a study this rate has been reported 24% among European teenagers (Hultén, 2001). Welch (2001) concluded lower age, female gender, unemployment are the main indicators of suicide. In Iran several studies have been conducted in relation to different aspects of suicide in Iran (Sheikholeslami, *et al.*, 2008; Amiri, *et al.*, 2012; Ghazinour, *et al.*, 2009; Jafari, *et al.*, 2015; Lari, *et al.*, 2007; Nazarzadeh, *et al.*, 2013; Roohafza, *et al.*, 2014; Zarenezhad, *et al.*, 2015), but could not determine an accurate cause. The trend of why and how suicide takes place regarding multi aspects of this phenomenon. Thus, the present study has been conducted critically on the indoor patients admitted to Hazrat Rasoul Hospital in Tehran 2007-2011 who committed suicide.

Research method

The present research is a descriptive and cross sectional study conducted on patients admitted to Hazrat Rasoul Hospital in Tehran 2007-2011 have committed suicide. Many patients have not supplied complete information. Among 600 cases under study, after initial examinations, only 483 cases were included in the study.

Results

Table 1 displays demographic information of the people under study. In this regards, among 483 cases under study, 248 (51.3%) of those who have committed suicide were men, 64.8% were single, 43.3% had under diploma and 35% had diploma. Rate of suicide in people with academic degree has been 21.7%. 32.9% housewives and 22.8% unemployed have been reported as the highest rate of people who committed suicide. Mean and standard deviation of people's age have been 28±9.7 which was at the age group 13-83 years old. The age group (21-30 years old) with 50.9% and age group (20 years old) with 20.9% have more likely committed suicide. The least suicide figure relates to age group above 50 years old. 197 individuals (40.7%) had history of psychiatric diseases, 110 individuals (22.7%) had history of previous suicide, 77 individuals (15.9%) had history of drug abuse and 58 (12%) had physical diseases.

Figure 1 displays distribution of psychiatric diseases in the ones who *attempt suicide*. To sum up, 59% of people had no history of mental diseases. Among the ones affected by mental diseases, severe depression, schizophrenia, personality disorder had the highest frequency.

Table- 1. Demographic characteristics of people attempted to suicide in Hazrat Rasoul Hospital in Tehran 2007-2011

	Variables	Number	%
Gender	Man	248	51/3
	Woman	235	48/7
Marital status	Single	313	64/8
	Married	152	31/5
	Divorced	16	3/3
	Widow	2	0/4
Education level	Under diploma	209	43/3
	diploma	169	35
	Associate degree	26	5/4
	Bachelor degree	77	15/9
	Master degree and above	2	0/4
Job status	Unemployed	110	22/8
	Housewife	159	32/9
	Student	101	21/9
	Other jobs	113	23/4
Age	20 years old and above	101	20/9
	21-30 years old	246	50/9
	31-40 years old	79	16/4
	41-50 years old	43	8/9
	Over 50 years old	14	2/9
Age	Standard deviation ± mean 28±9/7	13-83	
Background history	History of physical diseases	58	12
	History of psychiatric diseases	197	40/7
	History of previous suicide	110	22/7
	History of drug abuse	77	15/9

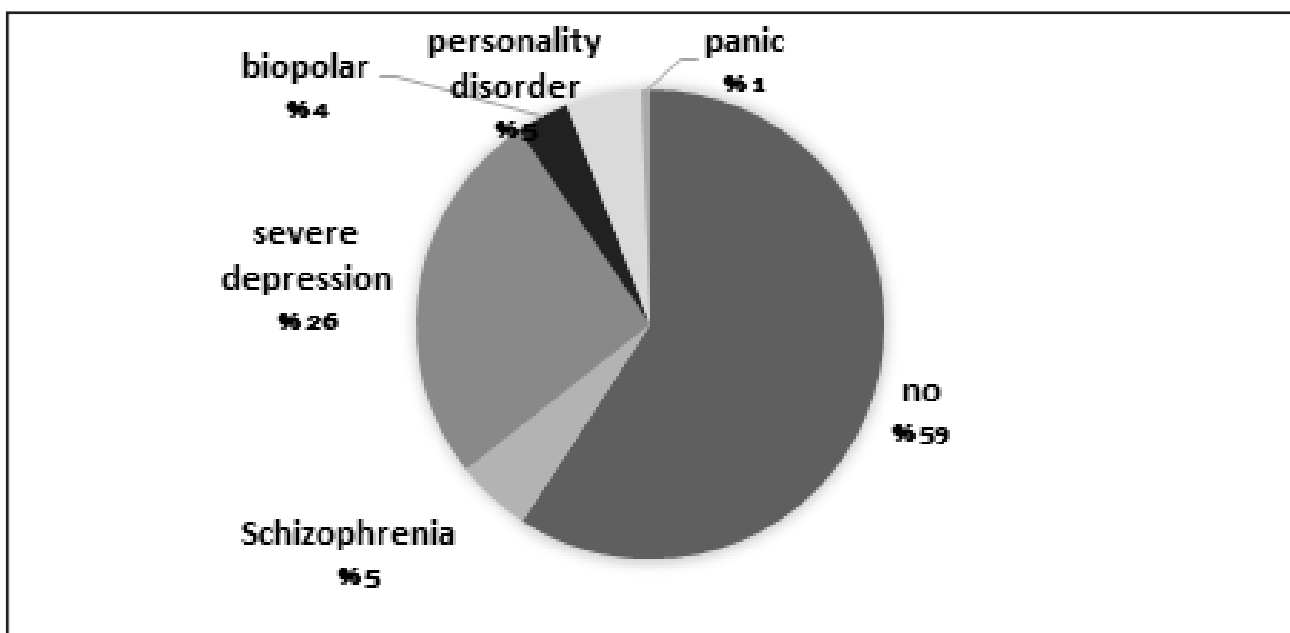


Fig. 1. History of psychiatric diseases in the persons attempted to suicide.

In terms of time distribution, the highest suicide has occurred at night (31.3%) and morning (30.8%) and the least suicide rate has occurred in evening. The highest suicide cases (61%) had occurred at three early days of week and the least suicide cases had occurred on Thursday (table 2).

Table -2. 24 hours and monthly time series for attempt to suicide.

Variable		Frequency percent
Suicide time	Morning	30/85
	Noon	22/57
	Evening	15/32
	Night	31/26
Day of Week	Saturday	20/08
	Sunday	17/6
	Monday	22/98
	Tuesday	15/53
	Wednesday	8/7
	Thursday	6/63
	Friday	8/49

In terms of monthly distribution, most suicides had occurred in January (19%), February (9.32%), September (9%). The least frequency of suicide had been reported in December and March. Thus, in terms of season, the attempted suicide patients attempted to suicide in winter (33.4%), summer (23.2%), spring (22.1%) and autumn (22.1%)(fig. 2).

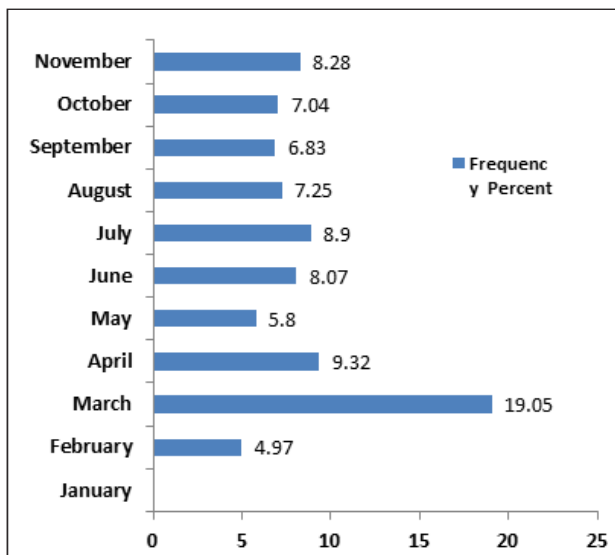


Fig. 2. Monthly distribution on attempt to suicide in 2007-2011

Causes of suicide referring to report by relatives and medical history of patients included family dispute (48.9%), psychiatric diseases (24.8%) and economic problems (9.5%). The least cases related to suicide to release from prison (1%) (fig. 3).

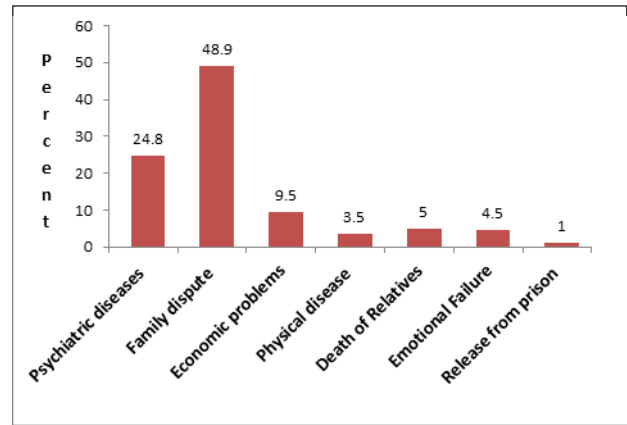


Fig. 3. Causes of suicide in the attempted suicide patients admitted at Hazrat Rasoul Hospital in Tehran 2007-2011.

Suicide technique has been different in patients so that suicides in 57.8% cases had taken place with tablet supplementation. Then, self-mutilation and the handling vessels (29.4%), hanging and falling from height (3.5%) were in next groups (fig. 4). Among pills, 41% cases of suicides have taken place with eating benzodiazepines and 36% cases of suicides have taken place with eating acetaminophen.

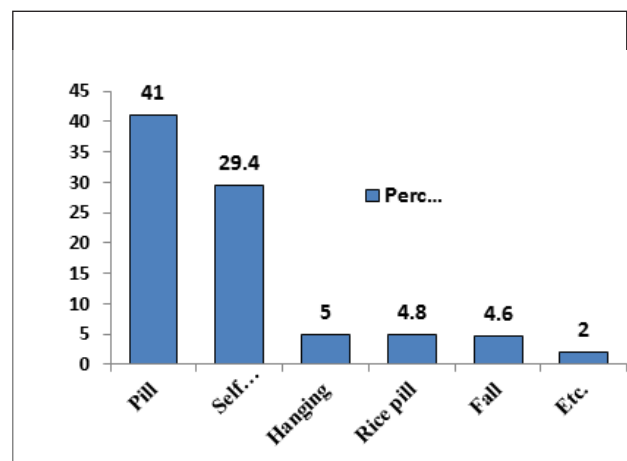


Fig. 4. The most common ways for attempting to suicide.

Among 483 cases attempted to suicide, just 14 cases (2.9%) have led to death and 97.1% cases of suicide have been unsuccessful and led to attempted death (fig 5).

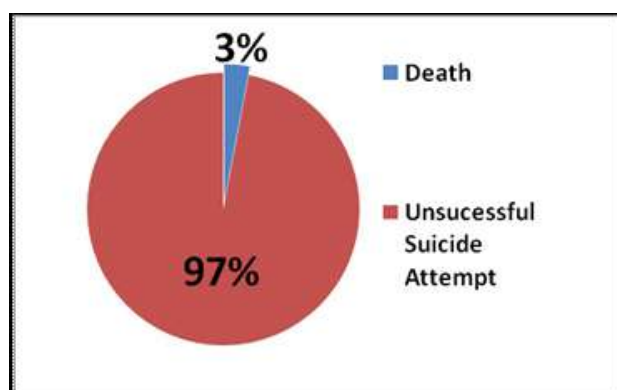


Fig. 5. End of suicide in the patients attempted suicide.

Discussion

Epidemiological survey of suicide patients admitted at Hazrat Rasoul Hospital in Tehran 2007-2011 has been conducted. In this study is based on 483 cases. The present study further indicates that in such cases, suicide attempt involves male living lonely, housewives and unemployed people. It is also noticed that the persons having diploma and degree are the highest (table- 1). The main reason of higher rate of male suicide is that in society there are high expectations males are for the meal of the family (Roohafza, *et al.*, 2014). The role of family and economic problems, social participation and mental problems in attempt to suicide has been reported by Mihandoost (2013). This is in confirmation that housewives being unemployed is causing more pressure on male partner in the family as suggested by numerous investigator (Agerbo, *et al.*, 2002; Mihandoost (2013): Nazarzadeh, *et al.*, 2013; Farhangdoost, 2010; Pearson *et al.*, 2002; The study further confirmed that observations that young or old age in countries like China and Netherlands is not the matter (Zarenezhad *et al.*, 2015; Roohafza, *et al.*, 2014; Amiri, *et al.*, 2012). The age, mental-social status, drug abuse, history of previous suicides in the family has been the most important risk factors in developing countries (Hultén *et al.*, Pajoumand., 2007 ;Roohafza, *et al.*, 2014; Vijay 1 ; kumar *et al.*, 2005; Welch (2014)). In study by Khalkhali *et al.*, about 20% of people had history of suicide in general, in their study, this important point was mentioned that each attempt to suicide can increase risk at successful suicide to 33% (Farhangdoost, 2010; Jafari, *et al.*, 2015)

Khalkhali, *et al.*, (2007) found that history of previous suicides and lack of social support has increase risk of suicide (20%) in the population. Dadpour, *et al.*, (2015) found severe depression and consumption of psychotropic drugs causes motivation of suicide. Mental diseases refer to the main factors which contribute in incidence of suicide phenomenon and variety of studies has been confirmed (Dumais, *et al.*, 2005). In a study on 5414 suicide cases in Hamedan, family problems and psychiatric disorders have

been mentioned as the main cause of suicide (Janghorbani and Sharifirad, 2005; Amiri, *et al.*, 2012; Mihandoost, 2013). In a meta-analysis Mohammadi *et al.* (2005) is of the opinion that 45% disorder belongs to psychiatric treatment. Shirzad and Gharedaghi (2007) confirmed the observations of earlier authors.

Schizophrenia is a disabling, chronic, and severe mental illness that affects more than 21 million people around the world. The main causes of suicide include family dispute, psychiatric diseases and economic problems. 41% of patients attempted to suicide had psychiatric diseases including severe depression and schizophrenia of patients attempted to suicide. Also, the brains of people with schizophrenia look slightly different than those of healthy people. For example, fluid-filled cavities at the center of the brain called ventricles are larger in some people with schizophrenia. Many drug including tablets benzodiazepines and acetaminophen were used in the treatment of patients who attempted suicide. 41% cases occurred with the use of benzodiazepines while 36% cases occurred with acetaminophen (Hultén *et al.*, 2001; Dumais ., 2005; Dadpour *et al.*, 2015;).

Conclusion

The present investigation concludes that male of about 30 years are having less education with family disputes attempt and living lonely desire to commit suicide. 3% of cases have led to death. The main cause is psychiatric disorders. The awareness for counseling and allopathic treatment are to be the used as treatment.

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