

# Risk Factors of Suicide Attempt in Tabriz, Iran

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## Abstract

**Objective:** Suicide is among the main problems in society and is caused by many factors. These factors are different between developed and developing countries. This research was performed to investigate the epidemiological data related to patients who attempted suicide by poisoning in Tabriz, north west Iran.

**Materials and Methods:** Throughout a four-month period, 300 self-poisoned patients (168 females and 132 males) referring to Sina educational hospital in Tabriz, were evaluated by a general psychiatrist and psychologist through interview and filling out a questionnaire.

**Results:** The most common precipitating factor was family conflict followed by psychiatric disorder and unemployment. Medical illnesses, in particular physical handicaps, substance abuse, and other psychosocial stressors were also effective factors.

**Conclusion:** Precipitating and clinical risk factors associated with suicide attempts in Iran resemble those described in literature, but with a few variations.

**Key words:** Suicide, drug poisoning, suicide attempt, Iran

Please cite this article as: Bazargani Z. et al. Risk Factors of Suicide Attempt in Iran. *World Family Medicine*. 2017; 15(10):28-31.

DOI: 10.5742/MEWFM.2017.93133

## Introduction

Suicide is a major public health problem and is defined as a purposeful action of an individual who intends to terminate one's own life. According to the World Health Organization (WHO) in the year 2000, approximately one million people died from suicide, and 10 to 20 times more people attempted suicide worldwide (3). There are some differences in suicide and suicide risk factors between developed and developing countries (3,18). In Iran, the lifelong prevalence of suicide attempt is 1.4% (14).

Suicide attempters are thought to be heterogeneous with complicated psychosocial and psychiatric conditions influenced by cultural factors (8).

Suicidal behavior is determined by a number of factors. These can be classified under the terms of predisposing factors and precipitating factors. Predisposing factors are internal determinants such as gender, age, and mental illness. Precipitating factors deal with external or environmental influences upon the individual including unemployment, physical illness or disability and family history of suicide (8,21).

Iran is a Middle East country with Islamic culture, which strongly prohibits suicide. From religious and socio-cultural view points, suicide is considered as a shameful act. Stigma associated with suicide makes it difficult to collect data accurately. Consequently, numbers of attempted or completed suicides may be underestimated. Suicide attempt is a known potent risk factor for completed suicide and predicts subsequent serious acts. Therefore, study of attempted suicide could have benefit for better prevention and diagnosis (5, 6, 22).

The objectives of this study were to describe the subject characteristics and clinical features of suicide attempters in Tabriz and to examine the precipitating risk factors before attempting suicide.

## Materials and Method

Our sample comprised 300 people who had attempted suicide and who had been sent to the emergency room in Sina general hospital in Tabriz, during a four-month period (May-September).

There are three general hospitals with emergency rooms in Tabriz, north east of Iran, and only one of them offers emergency psychiatric services. To the best of our knowledge, during the period of data collection, most suicidal patients in Tabriz were sent to one of these three local general hospitals.

After giving informed consent, precipitants were asked to fill out two forms. One was a demographic questionnaire about sex, age, education level, job, marital status, and history of previous suicide attempts both in the patient and in his/her first degree relative or his/her friends. The other was a precipitating stressors checklist to assess any precipitating factor related to suicide including family relationship problems, psychiatric disorder, unemployment, other relationship problems, substance abuse, chronic physical illness, occupational stress, academic stress, hopelessness, financial stress, death of a close friend or relative, couple relationship problem. One internist examined patients to rule out general medical conditions. A general psychiatrist interviewed the patients. Diagnosis was made based on the criteria of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV).

The data were analyzed by descriptive statistics using SPSS Version 11.

## Results

There was a higher proportion of females (56%) than males (44%) (168 vs.132). The most common used suicide methods were poisoning by medication such as Amitriptyline, Phenobarbital, Diazepam, and fluoxetine (76.3%), followed by organophosphate poisoning (23.7%). Table 1 shows the frequency of gender type, mean age of the subjects, marital status, level of education, frequency of suicide attempts, and the occupation of the patients. Only two cases had a family history of suicide and three cases had past history of suicide in their close friends. The most common precipitating stressors for suicide attempts in our sample were family relationship problems (72.7%) followed by psychiatric disorder (35.3), unemployment (24.6%), other relationship problem (10 %), substance abuse (8%), chronic physical illness (6%), occupational stress (4.5%), academic stress (2.7%), hopelessness (3.3), financial stress (1.7%), death of close friends or relatives (1.7%), and couple relationship problems (0.7%).

**Table 1: Characteristics of patients who attempted suicide**

Variable		Number	Percent
Sex	Female	168	56
	Male	132	44
Marital status	Single	143	47.7
	Married	148	49.9
	Divorced or widow	9	3
Month	May 22- June 21	17	5.7
	June 23- July 22	130	43.3
	July 23- August 22	84	28
	August 23- Sept 23	69	23
Job	Unemployed	53	15.9
	Simple worker	96	32
	Student	26	8.7
	Governmental	19	6.3
	Housewife	106	35.3
Education level	Illiterate	18	6
	Primary & Secondary school	183	61
	High school	80	26.7
	Academic	19	6.3
Number of Previous Attempts	1	243	82.3
	2	33	11
	3	7	2.3
	4	7	2.3
	5	2	0.7
	6	3	1
	7	1	0.3
	8	3	1
	9	1	0.3

## Discussion

The present study surveyed the clinical characteristics and precipitating risk factors of suicide in an emergency room. The results revealed that suicide attempt rate among women is higher than among men (56% vs 44%). This confirms both earlier and recent reports of increased risk of attempted suicide associated with the female sex (6, 7, 16). In most countries men have a higher reported rate of completed suicide, whereas women have a higher rate of attempted suicide (6, 14).

In this study, 74% of the suicides occurred between the ages of 10 and 29 years. This has also been demonstrated by other studies on suicide attempts (10). High rate of impulsivity in adolescents' suicidal behavior (90%) may be a good explanation for it (12).

Our data showed higher suicide rates for married persons than those who were never married (157 vs 143). This is against other studies in the west that consider marriage as a protective factor (16) although it is consistent with previous studies in developing countries (9, 10, 11, 13, 17, 20). One of the explanations is that in developing countries,

marriage appears to be a significant source of stress (especially for women), leading to suicidal behaviors. One study in Hong Kong suggested that responsibility and increase of work load in married life are reasons for high female suicide (23).

We found that 17.7% of those attempting suicide had a history of an earlier attempt. This supports other articles that pointed out that a previous suicide attempt is a strong predictor of future suicide (5,6, 15,20,22).

Most of the males attempting suicides were simple workers or unemployed. The majority of our female patients were housewives and financially non-productive. These results highlight that lack of a job and major financial setbacks, which often lead to debt traps, are major reasons for suicide in these groups (4,17,19).

In this study, family conflict was one of the highest precipitating stressors. As mentioned in other evidence, a healthy relationship among family members have been identified as a protective factor and family conflict is considered as a risk factor (1, 3, 7).

The majority of suicide attempts occur in the context of psychiatric disorders (5, 8). Yamada et al. reported that 81% of suicide attempt cases had an axis I diagnosis. He suggested that the treatment of psychiatric disorders is a basic prevention for suicide (22). In our sample, psychiatric disorders were reported in 35.3% of participants. Other psychosocial stressors and risk factors were relationship problems, academic stress, and hopelessness. These are consistent with other studies (5, 7). Lack of self esteem and problem solving skills in the context of psychiatric disorders may predispose a person to suicide when faced with these stresses.

There are some limitations that should be considered. Firstly, our sample is restricted to one province; therefore, the result could not be generalized to other areas of the country. Secondly, we performed an unstructured interview. Thus, the prevalence rate of psychiatric disorders was probably underestimated. This is somewhat inevitable due to the nature of our sample. Nevertheless, the results of this study identify areas for further focused research.

## Conclusion

Precipitating and clinical risk factors associated with suicide attempts in Iran resemble those described in literature, but with a few variations. Supportive intervention for many modifiable risk factors seems plausible. In addition, life skill training might be considered as a prevention program.

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