Suicide in Tehran: A Cross Section Study in 2007-2008

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Abstract: Suicide refers to the death of a person that is primarily achieved by self-harm. Nowadays, suicide is considered as one of major public health issues. This study is a descriptive and analytical study that aims to identify the suicide rate, the risk factors in suicide, and the methods of suicide in Iran. This study used a survey method (questionnaires and interviews) to identify the risk factors associated to suicide. Chi-square test and SPSS software were used to measure the reliability and internal consistency of research. The finding shows that there is a significant relationship between suicide and demographic variables include age, sex, educational level, adherence to religion, and occupation. This research also shows psychological factors include depression, addiction, lack of social activities, and mental disorders caused by chronic disease, are leading risk factors for suicide.
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1. Introduction

Attempted suicide is the practical expression to which a person deliberately and consciously taking one's own life. It is one of the major health issues and important in all aspects of psychopathology research. The most significant cause of suicide is challenging and complex problems of human needs whereby it is chosen as the best way to escape from dissatisfaction. Inability to properly solve problems or stress can lead one to behaviors that interfere with the ability to compromise. Inability to compromise takes many forms include anxiety, frustration, depression, dual conflict, emotional disturbance, increased sensitivity to external stimuli, and feeling of despair. Severity of suicide can be considered as a spectrum that starts from safe and preventable behaviors and can be terminated by severe non-preventable behaviors. In which today suicide in all human societies' is considered as a public health issue. Some theories of psychology determine dynamic process as a factor in suicide (Leo, 2003).

Risk factors for suicide vary with age, gender, ethnic or region. In this study we conducted research on the relationship between risk factors for suicide and most common reasons for suicide. Two most common reasons for attempted suicide are social factors and medical and psychological factors.

A: Social factors

1.   Emotional factors include feeling of loneliness, lack of family support, stress, failure in love, conflict, divorce, loss of close friends, failure in education and life, sexual abuse, loss of prestige and dignity, chronic diseases and dangerous infection, and social isolation.

2.   Economic factors include: unemployment, bankruptcy, inflation, economic crises caused by political conditions, dismissal from work and so on.

B: Medical and psychological factors

Medical and psychological causes of suicide include thoughts and feelings of emptiness, despair, guilt, feeling failure, severe emotional crises, physical illnesses such as cancer, AIDS and hepatitis, and disorders ‹such as psychological addiction to drugs and alcohol, disease, depression, Schizophrenia, severe anxiety attacks, combined with fear, fear of illness, modes of anger and sudden anger, some behavioral disorders, anti-social personality. Statistics show that 95% of people who commit suicide are suffering from mental disorder. Statistics also show that 80% of depressed patients, 10% of schizophrenic patients, 50% of individuals with delirium cases are attempt suicide.

According to World Health Organization, suicide rates are quoted as per 100000 people per year and attempts is 10 to 20 times more frequent than completed suicide.[World Health Organization (2009)] Unfortunately, no official domestic statistics of suicidal attempts have been published in Iran. However, International statistics indicate that the overall rate of suicide in Iran is 9% suicide per 1000 people, accounting for 65% of male and 35% of female suicides where it is 1% of total deaths.[Voracek ,Martin. 2004] Furthermore, the few studies conducted on this field carried out very different expression and statistics compare to community-level statistics.

Based on the data from Statistical Center of Iran for the year 2003, the number of 2486 men and 1481 women has been reported to commit to suicide in Iran. In addition, in May 2008 the Ministry of

Health announced that on average, about 13 suicides per day occurred in the country at a mean age of 29 years. According to this statistics suicide is about two to four times more common among women than men. The report, published by Ministry of Health, states: "Although Ian still has a lower rank of suicide than many countries, but comparing these statistics to previous years shows a significant growth; thus the suicide rate from 1.3 per 100000 people in 1984 increased to 6 per 100000 people in 2004. Suicide rate was 5.6% in 2005 followed 5.65% in 2006 and 5.6% in 2007."

Ilam and Kermanshah provinces in Iran have the lowest rate of suicide and the provinces with the highest number of suicides by women are Ilam, Bushehr, Khuzestan, kohgiluyeh and Boyerahmad, Fars, and kerman. The frequency of suicidal cases was found to be significantly higher in Tehran than other provinces where statistics show that 20 people commit suicide per day in Tehran which about eight of them lead to death. Considering the importance of the phenomenon of suicide, we intended to study suicides backgrounds, causes and motives among people living in Iran. We also have studied the role of some predisposing factors such as mental disorders and lack of social activity in this field.

Since the suicide attempters have a special clinical profile and there is some indication that suicide may occur, thus the results of this research can help social planners to better understand these factors and help the health authorities to have effective role in the secondary prevention.

2. Material and Methods

This study is a descriptive and analytical study that aimed to specify the amount, causes and methods of suicide. The finding shows that there is a significant relationship between suicide and demographic variables (age, sex, educational level, adherence to religion, occupation) and psychological factors (depression, addiction, lack of social activities, mental disorders caused by chronic diseases). To describe the findings and descriptive statistics to compare results Chi-square test and SPSS software were used. During this study we collected information through a questionnaire survey of 524 victims of attempts suicide from January 2007 to December 2008 among patients of emergency department, Shariati Hospital, Luqman, Motahhari, and Tehran were completely. All the questionnaires had been filled by one fixed interviewer in 24 hours after the suicidal attempts. Chi-square test and SPSS software were used to measure the reliability and internal consistency of research.

Table 1: Demographic characteristics of the studied samples

Factor	Woman	Man	Total%	X^2
Age				
Young < 33rd	50.9%	29.78%	45.23%	$p < 0.05$
Middle-aged 34-55	30.5%	50.52%	34.93%	$p < 0.05$
Old 50	19.5%	19.7%	19.84%	NS
Marital status				
Single	31.84%	39.36%	39.5%	$p < 0.01$
Married	51.19%	51.6%	52.26%	NS
Divorce	13.7%	5.85%	5.91%	NS
Widow	3.27%	3.19%	2.3%	NS

Table 2: Frequency distribution of relative samples studied variables according to some sociological and psychological factors that influence suicide

Variable	Description	Total	Percent
Gender	Woman Man	336 188	64.12% 35.88%
Education Level	Illiterate Primary Diploma Associate degree or higher	37 93 253 141	31.87 63.17 48.28 26.91
Income level	Weak Average Good	167 331 26	31.87 63.17 4.96
Job Status	Unemployed Self-employed	317 207	60.5 39.5
Drug use	Is No	247 277	47.14 52.86
Religion	Committed Lack of commitment	156 368	29.77 70.23
Depression	Is No	443 81	84.55 15.45
Family problems	Emotional problems Conflict and violence Other	327 151 46	62.4 28.82 8.78
Social activities	No Is	449 75	85.69 4.31
Schizophrenia	Is No	11 513	2.1 79.9

3. Results

The results of our study show that the rate of suicidal attempts among women is 64.12%, 45.23% is for age group less than 33 years, 52.29% married, 48.28% degree level diploma, 63.17% average income level, 60.5% unemployed, 85.69% No social activities, 70. 23% without belief and commitment to religion or belief, 52.86% non-drug use, 62.4 % have emotional problems, and 2.1% have had chronic

disease. Most common methods of suicide are using consumption of drug tablets which is 75. 76%. Statistical tests show that age, marital status, education, depression, lack of social activities, unemployment, lack of adherence to religion and methods of suicide associated with suicide rate, but there is no significant relationship found between drug users with suicide.

70.23% of attempter acknowledged the lack of adherence to religion and have left the necessary and desirable practices. It should be noted men with 64.4% are less than women. These results confirm that there is a significant relationship between gender and level of commitment to religion as one of the reasons the incidence of suicide.

86.52% of participants in this study answer negative to drug use, but there is no significant difference in the suicide attempt between the people with drug use and others (P> 0.05). On the other hand, this study shows that there is a significant relationship between sex and drug use with frequency of suicide (p<0.05) in the way that the amount of drug use in men studied in this research is 87.45%.

The role of schizophrenia in the incidence of suicide is pale; in the way that 513 patients (97.9%) of statistical sample have not been involved with schizophrenia, thus schizophrenia was no significant factor (p <0.05). In the other hand in the investigation about the gender with schizophrenia and the incidence of suicide it can be expressed that the share of men in this matter is more (63.63%), The other findings of this study indicate that the problems such as depression (53.53%), lack of social activity (63.25%), and unemployment (58.36%) among women committed suicide is more than men, thus statistically significant difference between men and women is observed (p <0.05). among family problems as one of the reasons affecting the incidence of suicide, emotional problems with frequency of 62.4% in comparison with other types of family problems such as conflict and violence has been identified as a most common factor (P<0.05). Investigation of the correlation between gender and family problems in this study shows that frequency of family problems among women is higher than men in the way that the share of emotional problems and strife and violence in women, respectively are 81.34% and 96.56%

The results shows that the highest frequency of suicide is among those with high school graduates (p(0.05>). The incidence of suicide among men with

levels of primary education, diploma and associate degree is more that women with same education level (p <0.05), while the suicide rate of illiterate women is more than illiterate men (p <0.05).

Table 3: Frequency of suicide methods used in the study groups

Reason for referring	Mean age	Standard deviation	Total	Frequency percentile
Eating drug tablets	24.94		397	75.79
Wrist cutting	23.12	3.91	29	5.53
handling	2.84	7.12	7	1.34
Falling from heights	23	-	1	0.2
Other	24.48	7.18	19	3.62
Poison	23.78	6.24	71	13.55

Table 3 shows the different suicide methods associated with their frequency. These results indicate that in most cases people had made suicide attempts using consumption of third ring antidepressants, while the lowest suicide method (2 / 0%) is falling from a height that has been statistically significant. In the comparison of the age of the studied samples and suicide methods, the results show the least average age go to those who use the action of fall from height (mean 23 years) and the maximum average age go to those have committed suicide with the systematic handling action (mean age 32.84). Comparison of the mean test shows significant difference (p <0.05)

4. Discussions

The most common trait among people who commit suicide is belief and mentality that suicide is the only solution to overcome intolerable feelings. This study is performed on different Age group and genders. Investigation based on age groups showed that the majority of people who attempts suicide have been in the age group less than 30 years. Several studies conducted worldwide indicate that the most cases of suicide ages 20-30 years. Resources indicated that Growing Crisis is a cause for suicide in this age. Growing Crisis can be expressed as the mental crisis that young people involved when they seek some changes in the periods of mental life in this period. This crisis along with half-baked characters, no mechanism of evolution defense, and psychological dependence can be a high factor to propel this age group toward suicide. Moreover, given that the population of Iran has a young population, so the high suicide rate in this age group

should be considered a serious health and social problem.

Based on these results the rate of suicide in women is higher than while in some countries such as Denmark, the rate of suicide in men is higher than women. It should be noted however gender pattern in many countries in relation to suicide rates indicate that in these countries, suicide in women in more than men, men have more successful suicides (Lodhi., 2005). Several researches done by named researchers has been proved that the main causes of suicide in women can be family and marital problems, husband drug addiction, polygamy, age difference between spouses, lack of understanding of husband, and severe sensitivity to divorce.

The results shows that the rate of married people of suicidal has been more than single people thus marital status among men and women has had a crucial role in the incidence rate of suicide. Marital problems and divorce factors discussed in the incidence of suicide in studies by other researchers have stated as an important factors (Ide, Wyder, Kolves, & Leo, 2010) .

Perhaps it can be expressed that in recent year's marriage impose greater psychological stress among couples which a major part of this stress has been induced as wrong behavior of wives.

This results show that the most common factors of is lack of social activities, depression, lack of adherence to religious beliefs, and emotional problems. There is different models to describe the phenomenon of suicide and it's characterization by factors such as social model - a culture that has been expressed by Dorkhym pattern or medical reasons for suicide that are looking for suicide causes in psychiatric diseases or disorders,   particularly depression (M. M. Valenstein, 2009).

 Select an agent to work alone as a cause of suicide is difficult and perhaps both psychological - social factors and biological factors are leading people to suicide, though the effect is noteworthy that the role of each of these factors in different people is different.

This study has shown that a significant percentage of suicide attempters were patients with depression psychiatric disorders. Of course, the psychiatric disorders are not the only determinant of suicide. In addition to psychiatric disorders, problems of adaptation, lack of confidence, relationship with others abnormal, exaggerated fear of dealing with people and society, jealousy, envy, and etc repeatedly play a role in suicide. Participate in group activities, social mobility, and increased presence in charitable enthusiasm among people living in the community and prevent infiltration and seepage negative thoughts and creation of feeling of depression. On the

other hand one of the dreadful problems among some people of Iranian society there is this mentality that depressed people should be ostracized from society. Numerous studies indicated that visiting mental health professionals, presence in various social groups, increased mobility and physical activity will prevent the incidence of suicide in people who are suffering from depression and despair.

 Some studies indicated that the highest shares in factors of suicide-related variables are linked to anxiety and depression. Also, in many studies, depression disorders in adolescents and young adults are considered as the most common disorders. (Bose A et.al.006, Prasad J et.al.2006)

The role of personality disorders and schizophrenia among the factors considered in the psychological community was investigated in this study which did not have much importance.

In this study, religiosity variable, the rate of suicide among people with lack of commitment to religious beliefs is entitled plenty more; that in this context the role of deterrence, protection, and preventive of religious beliefs can be invoked. On the other hand the presence of a religious ceremony, which causes people to communicate and increase social cohesion and solidarity, educes feeling of suicidal in person.

Emotional problems, lack of understanding from family and good behavior, impaired self-esteem, marital problems due to lack of understanding of each other causes suicides among the subjects of research.

 The incidence of suicide in young age groups and occurrence of more emotional problems in this group can be expressed due to their high sensitivity and that feel themselves in a closed framework when involving with emotional issues that it can feel no aversion, thus the risk of suicide are more. Resources cited that regarding to the fact that having a weak logic and often unchangeable in these group, a strategy to reduce suicide rate among this group is to help them by brief negotiations, consulting and creating change method in life and environment.

One of the social factors that affect the performance of people's psychology is job that because resolving a sense of over time. The present findings indicate that suicide rates among unemployed are higher than employed people. A study by Inoue (Inoue, et al., 2007) about the relationship between unemployment male and rising suicide rate in Japan has achieved the same result that unemployment is considered one of the main causes of suicide among people in Japan. They have found a significant relationship between the suicide rates in 1996-2002 with the unemployment rate in this period.

One of the issues related to occupation is income level that is considered to be one of the social – economic risk factors on the incidence of suicide. Currently unemployment in Iran is not only an economic issue but it is also discussed as an acute social issue. Unemployment at all levels of society cause many problems. In the lower classes of society, parents cannot afford basic living expenses of their unemployed children, and the same resultant social pressure encourage unemployed youth to do the violations of economic, social deviation, drug addiction, depression and ultimately committed suicide. In this research the highest rate of suicide rate has been shown in the middle class families, in which one or more young and educated unemployed living in the household and this has been one of the main areas of tension in the middle class households. many of marriages in middle-class families is done with the help of parents and their youth are not capable of operating their own lives due to lack of suitable jobs.

One of the important factors in the incidence of suicide attempters in the world is the issue of drug use and addiction. In the present study we found no statistically significant role of addiction among suicide attempters. On the other hand the addicted men are 6 to 7 times more likely to attempt suicide than addicted women. According to available statistics, about 2.5 million addicts can be found in Iran that if the number of them will be multiplied by the average family size can be claimed at least 10 million people in society is engaged the destructive problem of addiction. Addiction is the underlying cause of much psychological pressure on individuals in society.

The results have shown that most suicidal people have an education in diploma level. In studies by other researchers determined that people with high education level can use compliance practices and problem solving and able to successfully overcome crisis.

The rate of suicide in Tehran and generally in Iran has increased in recent years due to the rising number of educated people and lack of job opportunities suitable for them. May young people after graduating from university being turned away from their peer groups and experience isolation, loneliness, and depression which otherwise increases the probability of committed suicide if don't receive the support and care they need.

The most common method of committing suicide in Iran is by oral ingestion of toxic substances and the majority of victims have used drug tablets especially tramadol. This drug has been introduced as a sedative that works similar to addictive drugs. In recent years, according to studies conducted, consumption of third ring antidepressants is the highest method of commenting suicide after using tramadol tramadol. In the past few years in Iran, the increase in using this method in committing suicide among individuals, institutions responsible for public education have had efforts to prevent the occurrence of these events; by education people and public awareness. From the other hand, the factory producing this type of medicines is responsible for properly labeling the product to warn about dangerous drugs and the incidence of toxicity if using the higher dosage.

5. Conclusion

Attempted suicide is one of maladaptive behaviors in modern societies that unfortunately officials do not pay much attention to this issue and the causes involved in creating it. Basically, actions in this case should be done with the aim of prevention.

In this context the needs of cultural, social, economic and various social groups must be reviewed and predisposing factors should be eliminated. Counseling and guidance centers shall be established and the necessary warning about the medication, inappropriate prescribing and to make stock at home should be presented. And finally, a comprehensive effort shall be done to improve and stabilize cultural, economic and social community in various departments planning.

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