

# Effective factors of suicide in soldiers of a military force

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## Abstract

**Aims:** Suicide is not a random event among soldiers and happens as a result of a course of thoughts, behaviors, circumstances and inter-personal relations which mostly originate from some time before the military training period. The goal of the present research was to determine the background factors of suicide and self-mutilation among soldiers of a military unit.

**Methods:** This descriptive cross-sectional study was carried out on all soldiers of a military unit that had attempted suicide or self-mutilation from 2004 to 2007. Samples were selected by census method. The data collection tool was a researcher-made questionnaire. The required data were extracted from the suicide and self-mutilation files and were analyzed by SPSS 17 software using descriptive statistical methods and analytical tests such as Chi-Square test.

**Results:** 44% of the studied individuals had the history of self-mutilation or committing suicide. The most frequent background factors of self-mutilation and suicide were mental disorders (37.2%), family problems (36.7%), challenges with co-workers and work environment (13.8%). Majority of suicides were committed in winter. The suicide methods were use of firearms (49.9%), stabbing (25.2%), taking drugs (18.5%), hanging up (4.4%), taking oil and hand-washing liquid (1.2%) and a jumping from height (0.9%).

**Conclusions:** According to the obtained background factors, soldiers should be screened by the time of arrival at military environments and at regular intervals. Preventive interventions such as training, consultation and psychotherapy should be also performed.

**Keywords:** Suicide, Military, Mental Disorder, Soldier

## Introduction

Most people who tend to suicide, do not want to die in principle; they only want to end their pains and sufferings (real or imaginary), and in other words, they need help. Suicide is a death which is committed deliberately and on purpose to destroy oneself, known as successful suicide. If the suicide is committed, but does not lead to death, in this case of it is called embarking on suicide or unsuccessful suicide, which usually is said of those who sometimes pave the way for their escape in advance, although in some cases, they may not have any helpers. If deliberate injury is done to a part of one's body without the intention of death, it is called self-injuring idiomatically, which is used in the course of expressing negative and painful excitations which are not expressed verbally. Researches show that for each suicide leading to death, there are almost between 100 and 200 suicide commitments and suicide rate within 12 month period is about 100 times more than normal population after self-injuring and also the rate of committing suicide is between 8 and 10 times more than the death stemmed from suicide [1,2 and 3]. There is suicide in all age groups; but its frequency is more among the youth and in particular among soldiers, due to their particular

conditions [4]. Suicide is not a uniform phenomenon. It can be defined as a continuum in which there exists thinking about suicide at one extreme and the actual embarking on committing it at the other extreme [5]. Suicide rate in Iran is lower than most countries of the world, in particular western societies but is higher than most countries of Middle East [6]. The researches done show the frequency of successful suicide among civilians is 9 cases in 100,000 people (0.009%) and among military people is 12 cases in 100,000 people (0.012%) [7]. Research findings in military forces show that suicide is not accidental among soldiers; but as a result, usually occurs a stream of thoughts, behaviors, situations and interpersonal relations which mostly originate from the period before the military service. Some people of military forces feel extreme isolation and sufferings, and find no opportunity to receive help and suffer excitability disorders which usually lead to brave reactions such as committing suicide [8]. In research, various factors were considered as risk-taking factors leading to suicide commitment, such as age, gender, race, religion, marital status, occupation, psychological disorders, physical disorders, misuse of drugs and personality disorders [7]. In different resources, the commonest dangerous factors leading to suicide are: Psychological

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disorders, and previous suicide commitment. Depression disorders constitute 80% of 95% recognizable psychological disorders in perpetrators or suicide committers [5]. *Ennis's* research on investigating suicide thinking of soldiers belonging to Islamic Republic of Iran's Sepah ground forces showed that there is significant relation between low education level, the previous experience of committing suicide, dissatisfaction with military service, conflicts with others, the improper psychological status and the increase in suicide thinking [4]. In Chinese teenagers, weak family relations [9] and in Nicaragua, communication problem and parents' conflicts are among the factors leading to thinking and committing suicide [10]. In *Linehanna et al.* study, it is stated that between 39% and 90% of those sampled and investigated have the previous experience of embarking suicide [11]. In *Shakeri's et al.* research findings, those embarking on suicide have personal characteristics of being introvert, psychological self-torturing and psychologically unstable, more than those of control group [12]. The existence of suicide among soldiers in each volume and size has negative psychological and social effects and is considered a serious challenge for the country's health system and armed forces. In general, the emergence of suicide in military corps may lead to fear and terror in young soldiers and they may develop antagonistic feelings towards the authorities. On the other side, it is possible that some commanders and authorities designate inappropriate scores to self-injuring or suicide in soldiers, following these actions, so as to prevent next cases, which may lead to increase in self-injuring in the corps. Investigating the phenomenon of self-injuring and suicide is a technical, complex, scientific and usually preventable subject. Appropriate intervention can openly adjust or eradicate embarking on suicide [13]. The present study was done with the aim of investigating and recognizing the factors leading to suicide and self-injuring in soldiers belonging to one of military forces who had embarked on self-injuring or suicide during the years of 2004 to 2007, so as to recognize some of important and dangerous factors leading to self-injuring and suicide and to be considered in preventive actions.

## Methods

This study is descriptive and cross-sectional in nature and the society under investigation is all soldiers of one of military forces who had embarked on self-injuring and suicide during the years of 2004 to 2007.

The sample volume included all the society under investigation, amounting 341 people. In this study, the whole research sample was studied in a census and file-reading fashion.

The instrument to collect data was a realized questionnaire. This questionnaire was made on the basis of information existing in self-injuring and suicide cases, which included individual information, the place and time of embarking on self-injuring or suicide, the method of self-injuring or suicide, military experiences, the experience of physical and psychological diseases, the experience of self-injuring and previous embarking on suicide, family problems, incompatibility with the place (one is) servicing, judicial court's verdict, psychologist, doctor's point of view and those of the person directly in charge of the place the injured was servicing. These cases were launched particularly and technically, by the related force's mental health section, for each case of suicide and self-injuring and then were kept in the form of concentrated confidential in the force's mental health section. For each suicide or self-injuring case, there was designated a realized questionnaire with respect to the above information and the required information was extracted and was registered in this questionnaire, observing and investigating cases.

In the end, the acquired information was collected and was analyzed using SPSS 17 statistical software and statistical procedures (frequency distribution, mean, standard deviation and Chi-square).

## Results

Among the sample under investigation 12% were married and 88% were single, 28.4% were native people and 71.6% were non-native. In terms of education level, the highest frequency was in secondary level and the lowest frequency was in associate degree and higher degrees, and in terms of age, the highest frequency related to the age group of 18 to 20 years (Table 1).

The results of the screening and previous health inspections of the sample under investigation, which had been registered in their files, indicated that 24.4% of these people suffered from psychological disorders and 2.6% of them suffered from physical diseases. Also, 44% of them had the experience of embarking on suicide or self-injuring. With respect to the final expert's viewpoint, which derived from summarizing psychologist, physicist and commander's perspectives and investigating the servicing place of the sample under investigation and that also included obtaining forensic medicine's viewpoint, the shared factors

leading to the sample's suicide and self-injuring were investigated (Table 2).

**Table 1-** Investigating the sociological status of the sample under investigation

Variable	Absolute frequency	Relative frequency	
<b>Age group</b>	18-20 years	203	59.53
	21 years and over	138	40.47
<b>Education level</b>	Elementary	49	14.37
	Guidance school	119	34.9
	High school	71	20.82
	Diploma	93	27.27
	Associate degree and higher degree	9	2.63
<b>Marital status</b>	Married	41	12
	Single	300	88
<b>The servicing corps</b>	Line	257	75.37
	Headquarters	84	24.63
<b>The servicing place</b>	Native	97	28.45
	Non-native	244	71.55

Both in successful suicides which led to people's death and in embarking on suicide, in which the people

concerned were saved before dying, the highest frequency has been due to family and individualistic problems, including: The parent's separation, difficulties in choosing their spouse, imposed marriage, being rejected by the family, disruptive family relations like arguments, tussles, etc., emotional and love failures. But the reason behind self-injuring, which is attempted to attract attentions or to escape from difficulties and pains, is related to psychological problems. Furthermore, workplace and colleagues' problems, being the third factor in all cases in terms of frequency, included: Inappropriate punishments, slander and libel, discrimination, conflict and disruptive relation with others, and fear stemmed from failure in accomplishing the task.

To investigate the suicide frequency and self-injuring of the sample under investigation and its comparison with the years in which suicide and self-injuring happened, the Chi-square test was used for qualitative variables whose results showed significant difference. The highest frequency of suicide and self-injuring was rated (33.4%) in 2004 and the lowest frequency was rated 19.1% in 2005 (Table 3).

**Table 2-** Analysis of the factors leading to suicide and self-injuring in the sample under investigation

Factors	Successful suicide		Embarking on suicide		Self-injuring		Overall	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Psychological problems</b>	24	32.43	28	34.57	75	40.32	127	37.24
<b>Family and individualistic problems</b>	29	39.19	33	40.74	63	33.87	125	36.66
<b>Workplace and colleagues' problems</b>	14	18.92	9	11.11	24	12.9	47	13.78
<b>Drug addiction</b>	6	8.11	3	3.7	14	7.52	23	6.74
<b>Physical problems</b>	1	1.35	4	4.94	8	4.3	13	3.81
<b>Financial problems</b>	0	0	4	4.94	2	1.07	6	1.76
<b>Overall</b>	74	100	81	100	186	100	341	100

**Table 3-** The comparison among the years in which suicide and self-injuring happened in the sample under investigation (Chi-square = 12.60, Freedom degree=6, p=0.50)

The years of occurrence	Successful suicide		Embarking on suicide		Self-injuring		Overall	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>2004</b>	36	48.6	21	25.9	57	30.6	114	33.4
<b>2005</b>	9	12.2	21	25.9	35	18.8	65	19.1
<b>2006</b>	13	17.6	17	21.0	46	24.7	76	22.3
<b>2007</b>	16	21.6	22	27.2	48	25.8	86	25.2
<b>Overall</b>	74	100	81	100	186	100	341	100

In terms of the occurrence frequency of suicide and self-injuring, the highest rate belonged to winter season (30.6%), and in the months of January and February (10.9%) and on Saturday (19.9%) between 6 A.M. and 12 P.M. (32.6%). Also, the lowest frequency (21.4%) belonged to summer season, June (5.3%), on Monday (11.7%) and between 1 A.M. and 6 A.M. The most used ways of committing suicide and self-injuring were the use of gun while firing, amounting to 170 people (49.9%) and the least frequency were drinking oil and hand-washing liquid, amounting 4

people (1.2%). Other ways used were cold weapon (25.2%), eating medicine (18.5%), hanging oneself (4.4%) and jumping from the height (0.9%).

## Discussion

The findings of the research is in harmony with the findings of other researches in terms of the highest frequency of self-injuring and suicide related to the age of 20, secondary education level, being non-native, line servicing corps, singles and the use of hot

weapons; in a way that *Khademi's* et al. research findings indicated 79.9% of suicide in single people, and age group of 20 to 24 years of the sampled investigated [14]. In *Sajadi's* research report, the highest frequency of suicide was indicated at the age of 20 and secondary education level [15]. The number of suicide in Poland's ordinary soldiers has been reported 274 people in comparison with 163 official personnel [8]. 71.6% of the sampled people under investigation, in this study, were non-native and the studies done in England and Netherland have also emphasized that suicide is one of challenges and problems of immigration, cultural conflicts and the mental consequences derived from it [13]. Considering the above findings, it is advised that more attention be paid when dividing the soldiers accomplishing their military service, so that a newly-arrived, illiterate, single and non-native person is not sent to remote line corps (or units) and that these people be screened appropriately and if necessary, technical intervention be done about them concerning suicide prevention.

In present research, the highest frequency in terms of embarking on suicide and self-injuring was related to the use of hot gun and these findings are in harmony with those of other researches [14 and 16]; But in *Sajadi's* et al. research findings, the highest frequency, concerning the way of committing suicide, was related to eating medicine [15]. This difference stems from the differences in societies under investigation and the occurrence places. In *Sajadi's* research, the patients of the hospitals were investigated who had no easy access to the medicines, but the present research was done on the soldiers of military environments who had easy access to hot weapons. Therefore, easy access to ways of committing suicide is of high importance and it is necessary that the intended people be under supervision and schemes of intervention and prevention from suicide and self-injuring be done on them.

In this study, 24.4% of the sampled people had the experience of psychological disorders and also, the highest frequency of factors leading to suicide and self-injuring was related to psychological problems, rating 37.2%. In other researches, psychological disorders were also reported as one of the most important factors in committing suicide and self-injuring [1, 8, 17, 18]. Also, in *Farsi's* et al. research, the rate of self-injury among psychological patients was estimated 50 times more than those of the ordinary population and also, 44% of the sample under investigation of this research had the previous experience of embarking on self-injuring and suicide

[19]. In a research on investigating the prevalence of suicide among mentally and psychologically disordered people in one of Tehran's hospitals, 68.7% of the sample under investigation had the previous experience of embarking on self-injuring and suicide. Also, the findings of other researches are in harmony with those of that one [4, 15 and 20]. In *Linehanna's* et al. research, it is stated that 39% to 90% of the people under investigation had the previous experience of embarking on suicide [11]. 36.66% of self-injuring and suicide in the sample of this research was related to family and individualistic problems and that in China, the weak family relation, in Nicaragua, communicative problems and parents' argumentations are declared as factors leading to suicide and self-injuring [9, 10]. The 13.8% rate of suicide and self-injuring in this study was related to the workplace environment problems and colleagues which have also been confirmed in other researches [4, 8]. The endorsement of the findings of this research and other researches in terms of the effects of drug addiction on embarking on suicide and self-injuring is indicative of the necessity of fighting against drug addiction, and even against smoking. Many people, in particular, young soldiers are inflicted with drug addiction because of other problems such as fatigue, restlessness and homesickness, anxiety, timidity, insomnia (sleeplessness), etc. while listening to the other people's misadvice concerning the effectiveness of drug and alcohol in this regard. Therefore, establishing psychological counseling offices in barracks, informatics, training life skills and the dangers of drug taking, and also training the methods to face problems and finding solutions periodically and regularly for newly-arrived people can be an effective step in preventing drug addiction and in decreasing the prevalence of self-injuring and suicide.

With respect to the fact that the highest frequency of suicide and self-injuring in this study was in winter season, it is in harmony with *Khaksari's* et al. research findings [21]. The most cases of suicide and self-injuring of the present research have happened in official and working hours (6 A.M to 12 P.M.) and on the first day of the week (Saturday).

This result can indicate the existence of problems and difficulties related to military people's working environment and weakness in the colleague's relations. Thus, it is necessary to run regular training programs for all the crew periodically to bolster collaboration spirit and positive interpersonal relation so as to prevent discrimination, failure, inappropriate punishment, reprimand, and humiliating conducts and keeps one's dignity under any circumstances; in a way

that if something goes wrong, the action itself should be reprimanded, rather than destroying people's dignity and that the people should not be disrespected. In comparing the occurrence years, the year 2004 has the highest frequency in all three occurrences (successful suicide, embarking on suicide and self-injuring). Then, in 2005 there has been a dramatic decrease in successful suicide and self-injuring but in 2006 and 2007 there are seen increases in frequencies again. It seems that the high frequency of suicide and self-injuring occurrences in 2004 has led to prosecution and special activities on the part of related authorities and this has led to a dramatic decrease in the next year's occurrences (such as 75% decrease in suicide frequency leading to death). But the increase in these occurrences again in the next years (2006 and 2007) can be stemmed from the lack of seriousness in implementing or abandonment of the good measures taken in 2005 or their short-term nature. As such, it is emphasized that suicide preventive activities should be technical, continuous and long-term and these schemes should always be considered when inspecting the corps.

## Conclusion

The most prevalent factors leading to suicide and self-injuring in this study are psychological disorders, family problems, the experience of previous embarking on suicide, being single and non-native, incompatibility with colleagues and working environment, drug addiction and physical problems. Therefore, from the beginnings of people's entrance to military environments, they should be scrutinized regularly and periodically and the people concerned should be provided with appropriate interventions, preventing from committing suicide, by, for example, training, consultation and psychotherapy.

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