

The Factors Associated with Suicide Ideation in Iranian Soldiers

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Objective: The study focuses on psychosocial variables related to suicide ideation in young soldiers.

Method: 1329 Soldiers were randomly selected from the Infantry Forces in different regions. All the soldiers were requested to complete the Beck Scale for Suicide Ideation (BSSI) as well as General Health Questionnaire (GHQ-28). Data were analyzed using correlation tests.

Results: The results revealed that psychological factors, negative family background, environmental and task-related problems, and sociodemographic problems were significantly associated with suicide ideation.

Discussion: Overall, suicide ideation could be prevented if soldiers with psychosocial problems were identified and the Army officials applied appropriate methods to solve these psychological problems.

Key words: Military personnel, Suicide, Risk factors

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Suicide is recognized as a profound public health worldwide. It appears that suicide is among the 10 leading causes of death in all ages in most countries. Many national reports and researches have confirmed that suicide prevention programs are considered a vital attempt for public health. However, to achieve this goal, it is strongly endorsed that a neurobiological and psychosocial program may be more effective for a pervasive understanding of those with high risk of suicide (1,2). Suicide represented 1.8% of the global burden of disease in 1998, and it is expected to increase to 2.4% by the year 2020. Research showed that the prevalence of suicide, especially for young adults, increased during the recent years in Iran (3,4). According to the National Center for Health Statistics, 29,199 U.S suicide deaths occurred in 1999. The rate of suicide deaths was 10.7 per 100,000. The suicide is the 8th leading cause of death for males, who outnumber female suicide deaths by 4 to 1 (5). Research showed that the prevalence rate of suicide was between 2% to 18% (6,7). Firearm suicide rate among men is approximately six times more than that of women (8).

Suicide behavior includes suicide ideation, suicide attempts, and completed suicides. Suicide refers to any death through a direct or indirect result of a positive or negative act accomplished by the victim himself/herself which the victim knows or expects the result. Suicide ideation comprises a cognition process which varies from fleeting thoughts that life is

worthless to an intense delusional preoccupation with self-destruction (9- 11).

It seems that several factors may be associated with increasing suicide ideation, and they are as follows: mental disorders, personality disorders, unemployment, drug abuse, family problems, and being unmarried (12, 13). Regarding military services, some other factors such as hard situations, fear of punishment, aggressive behavior (14), previous suicide attempt (15), smoking, and alcoholism (16), low rank (17), tension between officers, and being away from family (18) were related to suicide attempts.

Reports from American Army forces reveal that soldiers committed suicides at elevated rates during 2003. Reports showed that soldiers deployed to Iraq and Kuwait had suffered from suicidal attempts. During the first three months of 2004, suicide rates significantly increased among these soldiers. Based on official reports, five American soldiers killed themselves in early July 2003. The rate of committing suicide was 17.3 per 100,000 in 2003, while the overall Army's rate during the same period was 12.2 for 2003 and 11.9 for 1995 to 2002. Comparing the suicide rate in the Army with the national average, it has been shown that this figures remain lower than the national average of 21.5 per 100,000 for males aged 20 to 34 (19). Research showed that suicide attempt is (9/100000) (0.009%) among the general population, and 12/100000 or (0.012%) among the soldiers. Assessing 150395 Austrian soldiers (born between 1973-1975 years) during two years, it was found that

155 of them attempted suicide during their compulsory period of their military service (20). Regarding the reason for mortality in the U.S. military personnel in 1980 to 1993, it was found that suicide is the third reason for mortality in men. The mean of suicide attempt rate was 12.5/100000, and the age range was between 17 to 24 years (21). which is higher than the previous findings, confirming that the highest suicide rate for males was 7.06/100,000, and their age range was 20 to 40 years (22). Data revealed that during the compulsory period for soldiers, the suicide rate is high during the first 12 months, while for officers and military staffs the suicide rate is high during 11 to 15 years of their job work (23).

The primary goal of this suicide research is to prevent suicide attempts or suicide related behaviors. Concerning the mortality and treatment of individuals who have deliberately harmed themselves, researches should focus on demographic and epidemiological factors associated with suicide ideation or its related behaviors. At the worldwide level, a review was carried out to highlight the association between availability of means for suicide and suicide rate. In that review, there was a clear indication of restricted access to lethal weapons especially firearms with decline in suicide (23). Bannan (2006) concluded that suicide is a major complicated public problem in communities. It is a multifactor problem resulting from complex interactions between psychological, social, and biological factors (24).

More clearly, suicide and attempted suicide should be regarded as a cultural phenomenon. Family and social circumstances may influence attitudes of those with high risk to harm themselves (25). Studies revealed that single men had the highest risk of completed suicide. Economically inactive persons also had 6 times higher suicidal risk than those who were active (26).

The main aim of the present study is to assess suicide ideation among soldiers. The study also attempts to find the relationship between prevalence rate of suicide ideation and factors that could affect it.

Materials and Method

The study subjects (n = 1383) included Iranian soldiers. Data were collected during the 3rd to 20th months of their compulsory military service period. The subjects were requested to complete a questionnaire comprising the General Health Questionnaire (GHQ), Beck Scale for Suicide Ideation (BSSI), and a Demographic Form. The GHQ28 has been translated into 38 different languages, and this is a testament for the validity and reliability of this questionnaire. The most common assessment of mental well-being is the GHQ. Developed as a screening tool to detect those likely to have or be at risk of developing psychiatric disorders, it is a measure of the common mental health problems (with domains of depression, anxiety, somatic symptoms and social withdrawal). Available in a variety of versions using 12, 28, 30 or 60 items, the 28-item version is used most widely. This is not only

because of time considerations but also because the GHQ28 has been used most widely in other working populations, allowing for more valid comparisons. Each item is accompanied by four possible responses, typically being 'not at all', 'not more than usual', 'rather more than usual' and 'much more than usual', scoring from 0 to 3, respectively. The total possible score on the GHQ28, ranges from 0 to 84 and allows for means and distributions to be calculated both for the global total as well as for the four sub-scales, using the alternative binary scoring method (with the two least symptomatic answers scoring 0 and the two most symptomatic answers scoring 1). The binary scoring method was used in this study. In addition, the subjects were classified as having good mental health, low or bad mental health by the cut off point in the GHQ28. The GHQ28 has an appropriate validity and reliability. Reliability coefficients have ranged from 0.78 to 0.95 in various studies (27).

The BSSI comprises of 21-item self-report instrument for detecting and measuring the current intensity of the patients' specific attitudes, behaviors and plans to commit suicide during the past week. The first 19 items explain the intensity of the suicidality. All items were rated on a 3-point scale ranging from 0 to 2. The total scores assess the characteristics of the respondent in a wide range of items concerning the wish to die, desire to making an attempt, and number of deterrents. The last two items evaluate the previous attempts as well as the seriousness of the intent to die associated with the last attempt. Five items of the BSSI are accounted as the screening items. Those who report a desire to commit suicide should complete the rest of the 14 items. The BSSI takes approximately 10 minutes to administer (28,29). BSSI has three subscales including desire to death (5 items), preparation for suicide (7 items), and the actual suicide desire (4 items). Two BSSI items including deterrents to death and deception or concealment did not load any factors. The BSSI has high internal reliability with Cronbach alpha coefficients ranging from .87 to .97. The BSSI has moderate test-retest reliability (r = .54) over a one week period of psychiatric inpatients. (30,31) Beck (1999) confirmed that the scale for Suicidal Ideation is a significantly better predictor of eventual suicide and may measure depression as a state or ` trait (28).

Besides the above scales, a sociodemographic form including several factors (e.g. age, education level, marital status, smoking, and drug abuse) was used in the study.

Results

The results of the demographic form showed that the age range of the subjects was 19 to 28 (Mean = 21.31, SD = 1.63). The majority of the soldiers were single (%85) and %15 were married. With respect to educational level, 30.5% of the subjects had not finished high school, 43.5% had a high school diploma, and 26% were college students or university graduates. 16.3 % of the subjects had a smoking background,

2.1% of were drug abusers, 8.7% reported to have a history of suicide attempts, 3% reported to have a bad relationship with their families and 10.2% had family problems.

With regards to the compulsory military service, 41.4% of the soldiers were dissatisfied with the compulsory period, 46.8% spent the compulsory period in the frontier zones and 53.2% in the urban zone. With respect to the relationship with officers and the direct commander, data revealed that 25.2% (n = 325) of the subjects were not satisfied with those officers in charge of soldiers (e.g. direct commanders or officers). 11.9% (n = 158) of the subjects showed feelings of worthless in their work environment. In addition, 11.8% (n = 157) complained about the heavy workload and hard work. %9.2 (n = 124) reported that they have wasted their time.

Analyses showed that suicide ideation had significant relationships with several sociodemographic variables such as educational level (r =0.17, P <0.047), marital status, spending time in frontier zones (r = 0.16, p <0.001), having smoking background, abusing drugs, aggressive behavior, family problems, history of attempted suicide, family background of attempted

suicide, family members' relationships, and mental health status (Table1).

Discussion

Suicide phenomenon is a continuum process and is described as an intra-individual process in reaction to the environment. Suicide behavior involves a wide range of behavior including feeling of despair, having suicide thoughts, concrete plans, suicide attempts, and finally completed suicide .

We strongly suggest that the neurobiological and psychosocial evaluation is necessary for achieving the goal of suicide prevention programs for those with high risk of suicide .

As expected, the results of this study showed that soldiers in the frontier zones experience more stress than those in the urban areas. Data revealed that suicide ideation is associated with several factors including developmental and situational factors. As previous studies indicate (12- 16, 18), the results of the present study demonstrated that having a smoking background and being a drug abuser are related with suicide ideation. In a similar line with the present study, the Army reports showed soldiers committed suicide due

Table 1: Relationship between suicide ideation with sociodemographic variables and mental health status

Sociodemographic Variables	Groups	With Suicide Ideation	No Suicide Ideation	Total	Sig
History of Attempted Suicide	yes	49	101	150	Ø= 0.413 P<0.001
	No	25	956	981	
	Total	74	1057	1131	
Marital Status	single	914	55	969	Ø= 0.059 P<0.001
	married	159	17	176	
	total	1073	72	1145	
Smoking	yes	116	39	155	Ø= 0.30 P<0.01
	no	954	36	981	
	total	1061	75	1136	
Drug Abuse	yes	9	13	22	Ø= 0.30 P<0.001
	no	1017	59	1076	
	total	1026	72	1098	
Mental Health	yes	16	913	929	Ø= 0.40 P<0.01
	no	60	164	224	
	total	76	1077	1153	
Family Background of suicide	yes	26	76	102	Ø= 0.24 P<0.01
	no	49	985	1034	
	total	75	1061	1136	
Mental Health (GHQ)	good	16	913	929	Ø= 0.40 P<0.01
	bad	60	164	224	
	total	76	1077	1153	
Family Relationships	good	34	788	822	V= 0.329 P<0.01
	moderate	20	260	280	
	bad	18	18	36	
Aggression and Violence	total	72	1066	1138	V= 0.251 P<0.01
	no	36	731	767	
	Little	16	256	272	
	high	6	44	50	
Aggression and Violence	Very high	16	28	44	V= 0.251 P<0.01
	total	74	1059	1133	

to bad situation in the region and stressful conditions. Moreover, some studies showed that smoking is more common among depressed persons. This may be a possible explanation for suicide attempts or suicide ideation. However, those with personality problems may predispose to become drug abusers or to attempt suicide (32). It seems that smoking and drug abuse are not the only reasons for increasing the rate of suicide attempt. In general, the rate of suicide attempts was higher among soldiers with mental health problems than among the soldiers with no psychological problems (14,15). Psychological disorders are the most important factors that can cause suicide attempt. Those who attempted suicide may think that suicide may be a way for escaping bad and stressful conditions. In this process, soldiers who were in bad conditions and experienced mental health problems, choose suicide as a way to escape their stressful condition (32, 33).

The prevalence rate of suicide ideation was more among those soldiers who had aggressive behaviors (12,14, 15,34) and interpersonal problems.

The prevalence rate of suicide was more in soldiers who had many problems in their families. Some of these problems including economic problems, drug abuse, and unemployment increased the risk of suicide attempt. In conclusion, the present study supports the previous results and suggests that mental health problem is the main issue in the Army forces which should be taken more seriously by the Army senior commanders.

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