

Demographic characteristic correlate to emotional reactions of soldiers

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Abstract

Aims: Entering the military environment in early youth is a very critical period in young people's lives in all countries and being in such conditions is often accompanied by tension, anxiety and emotional reactions. This study was performed with the aim of evaluating the demographic characteristics related to emotional reactions in training course soldiers.

Methods: In this cross-sectional descriptive-analyzing study, two companies with a total number of 320 soldiers were selected by simple random sampling method from some garrisons in different states of the country, and 291 soldiers entered the study. Their stress, anxiety and depression status was assessed using DASS 21 standard questionnaire. Data was analyzed using descriptive statistics and parametric statistical tests by SPSS 15.

Results: The amount of stress, anxiety and depression was severe or very severe in 14.8%, 31.3% and 18.2% of soldiers, respectively. Considering the relationship between emotional responses and demographic factors, results showed that there was a significant relationship between education, previous job, satisfaction with income, type of supervision, drug history and family history of mental disease with the rate of emotional reaction ($p < 0.05$).

Conclusion: Considering the great amount of emotional reactions in soldiers and the impact of military environment stress factors on intensification of such reactions, administrative and educational measures should be taken in order to prevent, control and reduce these reactions during soldiers' training course.

Keywords: Soldier, Stress, Anxiety, Depression, Demographic Characteristics

Introduction

In the current age, mental illness, stress, anxiety and depression are very common and pervasive, and despite the deep cultural changes and changes in lifestyle, many people lack the necessary and essential ability to deal with life problems. Therefore this makes them susceptible to face problems of daily life [1].

World health organization's (WHO) report shows that mental disorders have affected about 10% of the adult population and the incidence of these disorders is increasing. About 450 million people worldwide are suffering from psychological, neurological and behavioral problems and suicide is considered to be one of the three major causes of death among 18-34 year old population [2]. Also 5 to 12% of men and 10 to 20% of women experience depression during their life [3]. In Iran, the national health-disease survey plan during 1998 to 1999, has reported that 21% of participants over 15 years are suspected to mental disorder [4]. Investigation by Shari'ati et al. on 460 students has shown that 42.6% of them suffered from mental disorders [5].

More than 33% of the Iran's today population is formed by youth community and according to the

current laws, a high percentage of these people enter into the military service to guard and protect the Islamic Republic [6]. Arriving to the military environment in early youth age and in the fifth period of psychological growth is a very critical period in the life of a young and efficient force of each country. This period in the military organization is associated with cognitive, behavioral, organizational, cultural, ethnic and tribal changes.

Therefore, being in such circumstances affects the individual performance because of creating pressure and anxiety because a person must learn how to play the hard, violent, intimacy and emotion role and what position to adopt in his commitments and relationships.

Dealing with these roles, the solid and continuous training, the multiple missions, acquisition of risky expertise and tolerance of pressure to fulfill their duties are other stress factors that can be minimized by coping styles [7]. This new period of life with all the advantages, associated with a lot of stress including separation from families, supportive system and favorite people, changes in feeding habits, restrictions on freedom of choice and especially high and imposed discipline, and forced to change locations frequently, changes in sleep habits, performance-induced anxiety

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against extraordinary expectations, problems with the commander or colleagues, fear of establishing relations with others, inability to solve problems and good deal with issues [8].

The soldier is suddenly struck by military life stress as an revealing factor, and given to the talent, background and also define of health (outcome of physical health, mental health and social health that interact with each other), it may lead to adaptive problems and the incidence of abnormal behaviors such as suicide, and self-striking or other striking. In other words, the inability to solve problems and deal with them appropriately may lead to compromise problems that show itself in the emotional turbulence form, increased sensitivity to external stimuli, anxiety disorders, mood changes and depression [9]. In general, in the army adaption is needed in two stages and while some people attempt to adapt themselves to these processes psychologically collapses. The first stage is the military adaptation of newly arrived individual to the training camp that the changing of lifestyle from civilian to military one is necessary and second stage includes adaptation with austerity of life in fronts or war danger [10].

Given the importance of the abovementioned issues, the main purpose of this study was to investigate the frequency of emotional reactions and their relationship with the demographics of training Soldiers.

Methods

In this cross-sectional descriptive study, two companies with a total number of 320 soldiers were selected by random sampling method from some garrisons in different states of the country. Two weeks after entering the educational environment, in order to control stress by entering the military environment, Soldiers under study were evaluated by questionnaire included demographic data and DASS 21 standard questionnaire (scales of depression, anxiety and stress),

Nine soldiers, Because of their dissatisfaction, were excluded and questionnaire was completed by 291 soldiers. Among the Other inclusion criteria were the least literacy and the age range of 18-24 years.

Demographic questionnaire was about individual profile such as age, marital status, education, previous jobs and his parents, his family income and the history of mental illness in the family. DASS 21 standard questionnaire was used In order to investigate the emotional reactions of soldiers. This questionnaire is a self-reporting tool with two versions 42 and 21 options designed by Lovibond in 1995. In a sample of 21

items, 7 Questions is intended for each of the emotional states.

This tool has a spectrum of 4 parts in which each option is graded 0 to 3. The highest score in each subgroup is 21. Based on the degree of this tool, the stress between the numbers 0 to 7 is considered as normal, 8 to 9 as mild, 10 to 12 as moderate, 13 to 16 as severe and more than 17 as a very severe stress. The grading between 0 and 3 is normal for anxiety, is mild for 4-5, is moderate for 6-7, is severe for 8 - 9 and is very severe for more than 10. Likewise, the grading between 0 and 4 is normal for depression, is mild for 5-6, is moderate for 7-10, is severe for 11-13 and very severe for more than 14 [11].

Validity and reliability of the mentioned questionnaire have been confirmed in various studies by Crawford and Henry, Bayram and Bilgel, Al-Gelban et al. and Edimansyah [12, 13, 14, 15, 16]. In Iran, Haji Amini, aghebati and moradi panahi have used DASS21 test in their studies. In a study Sahebi "on the large population in Mashhad" has also confirmed the validity of this questionnaire in Iran [17, 18, 19, and 20].

Completed information was analyzed using descriptive statistics, parametric tests and SPSS 15 statistical software. After the investigation of the distribution of quantity data by Kolmogorov- Smirnov test, independent T statistical test, one way analysis of variance and Scheffe Post-hoc test were used.

Results

The mean age of the studied soldiers was 2.1 ± 20.9 years old. The majority of them was single (89.69%) with the education of diploma or high school (92.63%) and were residents of that city (70.10%). The education of their father in 42.27% of them was elementary and 26.80% had literate fathers. In case of mother education, 40.89% of them were at the elementary level of education and 18.39% of their mothers were illiterate.

Before entering to military service, 10.65% of soldiers were student, and 32.99% were workers or farmers. 88.66% of them lived with other family members and were single parent. The Source of earning livelihood in 37.80% of cases, were family and in 51.55% were personal work and 18.9% of soldiers were completely dissatisfied with their income and the majority of them were somewhat satisfied. 10.7% of soldiers were smokers and in 89.35% of soldiers there wasn't any history of mental illness in their family.

A statistical significant relationship was found between some factors such as level of education, previous job, satisfaction with income, type of

supervision, smoking and drugs consumption and family history of mental diseases and the rate of emotional reaction. People with higher education (middle school to diploma) previous job, satisfaction

with their household income, and under the supervision of parents, as well as people with a history of drug use and history of the mental disease showed more emotional reactions ($p < 0.005$; Table 1).

Table 1- The mean score of demographic factors associated with the emotional reactions in the soldiers under study

Emotional reactions→ Causes ↓	Stress	Anxiety	Depression	Statistical test	
Marital status	Married	67.5±4.73	5.73±3.50	5.90±3.70	Independent T
	Single	7.34±4.79	5.40±3.94	6.44±4.45	
	Level of significance	0.65	0.43	0.32	
Place of residence	City	7.45±4.86	3.98±5.48	6.29±4.33	Independent T
	Village	7.16±4.59	5.33±3.71	6.60±4.51	
	Level of significance	0.57	0.59	0.49	
Education	High school to diploma	6.88±4.59	4.95±3.64	5.73±4.17	Independent T
	Guidance school	8.21±5.05	6.29±4.20	7.55±4.52	
	Level of significance	0.12	0.22	0.002	
Previous job	Student	6.16±4.10	4.06±3.26	4.84±4.05	One-way ANOVA
	Worker and farmer	8.75±4.49	6.33±4.04	7.78±4.35	
	Self-employment	7.06±4.89	5.33±3.88	6.14±4.34	
	Level of significance	0.13	0.02	0.003	
Source of household income	Parents	7.19±4.81	4.88±3.79	6.29±4.63	One-way ANOVA
	Personal Work	7.29±4.96	5.50±4.02	6.35±4.38	
	Other resources	8.35±3.59	7.06±3.24	6.90±3.44	
	Level of significance	0.47	0.02	0.78	
Satisfaction of family income	Yes	6.14±4.48	4.74±3.91	5.52±4.46	One-way ANOVA
	to some extent	7.61±4.93	5.38±3.75	6.80±4.28	
	No	8.50±4.55	6.74±3.99	6.72±4.36	
	Level of significance	0.006	0.01	0.078	
Type of supervision	Parents	7.28±4.75	5.20±3.73	6.31±4.42	One-way ANOVA
	Close relatives	9±5.96	6.00±3.75	8.80±4.86	
	Others	9.42±5.96	9.80±5.73	6.14±3.28	
	Level of significance	0.37	0.001	0.46	
Smoking	Yes	8.07±4.58	6.15±4.07	7.77±4.41	Independent T
	NO	7.29±4.78	5.39±3.82	6.26±4.35	
	Level of significance	0.29	0.44	0.08	
Family history of mental illness	Yes	9.76±5.44	7.13±4.90	8.90±4.90	Independent T
	No	7.09±4.62	5.24±3.73	6.09±4.23	
	Level of significance	0.004	0.012	0.001	

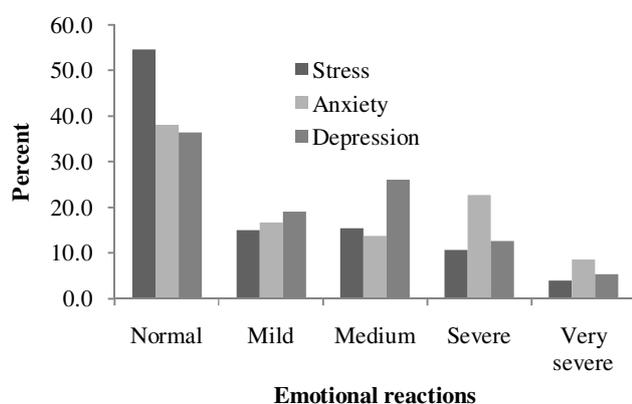


Diagram 1- Relative frequency of emotional reactions in the soldiers under study

The amount of stress, was normal or mild, medium, severe or very severe in 69.7%, 15.5% and 14.8% of

soldiers respectively, The amount of anxiety in 54.9% was normal or mild, in 13.7% was medium, and in 31.3% was severe or very severe.

Depression in 55.6% was normal or mild, 26.1% moderate and that of 18.2% was severe or very severe (Diagram 1).

Discussion

Since stress, anxiety and depression are reported as the consequences of stressful work environment in the previous research, health management authorities has considered job stress and how to control it in many carriers and organizations such as military collection, health and treatment, nursing and labor. Wang et al. following their study on workers's mental health have

considered working stress as the critical factor in creating mental disorders [21].

The results showed that the frequency of emotional reactions (stress, anxiety and depression) of considered soldiers is higher than its prevalence in society, so that 31%, 14.8%, 18.2% of them had respectively anxiety, stress, severe and very severe depression; however this reaction in general epidemiology of other groups has been reported to be about 10% [2].

Studies done in the field of reactions such as stress, anxiety and depression of soldiers were very limited and more studies has done on psychological factors and consequences of job stress on soldiers and the military.

For example, in a study that Fathi-Ashtiani and Sajjادهchi have done on psychological assessment of back and preparedness soldier in a military unit reported that 16.8% of soldiers faced with psychological problems [22]. The results of Ebrahimi et al.'s study on 102 fugitive soldiers and 105 soldiers referred to 506 Hospital Tehran showed that the prevalence of personality disorders in fugitive soldiers equal to 73%. Despite the statistical difference between these two groups, this rate in the non-runaway soldiers was reported 22% [23] and the results of these studies are consistent with our findings.

The Results of another study titled "the investigation of mental health situation of outpatient soldiers referred to a military clinic in Tehran" showed that of 301 soldiers, 42.1% had depression, 46.5% had anxiety disorders and 57.8% have been suspected of mental disorders [24] that this finding is inconsistent with our findings.

This lack of agreement could be explained by these facts that first, in a study reported suspected cases in mental disorders have been seen and in final diagnosis it is likely to expect less frequency and, secondly if we also add moderate cases to these statistics based on the classification of the questionnaire, the frequency of anxiety, stress and depression will be respectively 45%, 30.3% and 44.3% that is close to Farsi et al.'s study [24].

Wawrzynia et al. in their study on 1740 hospitalized training soldiers in one of the Poland military hospital have found that over 50% of the soldiers were not able to continue their activity. They have also reported that Neurotic diseases of them, has been most seen among mental illnesses [25].

Cho et al. in their the study on 7931 Taiwanese conscript soldiers, have been posed behavior disorders such as smoking in the garrison and their statistical

significant difference with pre conscription period as one of the causes of job stress [26].

In Nelson et al.'s studies, one of the reasons of abundance of using tobacco by soldiers in the twentieth century had been reported to be the provision of soldiers' spiritual comfort; however they are aware of the consequences of drug abuse on readiness and performance troop [27].

While et al. have reported other behavior disorders such as suicide of the United States armed forces and stated that the rate of this kind of disorders in aged 20 to 24 years was 3-2 times higher than that of the general population and workers.

In Iran, the research results of Anis et al. on 1329 soldiers have shown that the rates of suicidal thoughts in soldiers are 8.5% therefore they necessitate paying attention to the mental health of the soldiers [29].

In many other studies, the need for screening and mental health is recommended, especially in cases where soldiers are taken to war. The study by Milliken et al. on 222,620 American soldiers after returning from the war in Iraq, Afghanistan and elsewhere has emphasized the importance of this subject [30].

In similar studies done in the stressful jobs such as community workers, job stress implies as a factor affecting on the increase of the incidence of this reaction. For example, in Malaysia, Edimansyah et al. have earned the rate of depression, anxiety and stress equal to 35.4%, 47.2% and 31.1% respectively using DASS 21 standard questionnaire and have emphasized the fact that stress, Anxiety, depression are psychiatric important criteria in the stressful working set and prevalence of this excitement are directly related to risk factors and job conditions [14].

In today's modern society it is estimated that more than 70% of disease such as fatigue, headache and muscle pain affected by the background factors and over 60 to 80% of industrial accidents are caused by stress [31, 32]. Severe stress can increase behavioral responses such as smoking, drinking alcohol and drug habits and they in return will have negative effects on stress [30].

In many studies, including Messer et al., considering the mental health of soldiers and necessity of screening before entering the professional military has been emphasized [33]. Therefore it is deemed necessary to train soldiers about how to manage and control stress while doing the initial screening on stressful jobs such as military jobs, especially in the beginning of the their entering to the garrison (due to the necessity of adjustment, stress and anxiety can cause higher stress and anxiety), and even when their reaction is severe, Referral and placement measures

such as exemption from the stressful military training are to be considered to treat them.

Conclusion

Frequency of emotional reactions, stress, anxiety and depression in soldiers are higher than its prevalence in society. Educational level, previous job, satisfaction with income, type of supervision, smoking and drugs consumption and family history of mental disease is significantly correlated with mental emotional reactions of the soldiers.

Considering the frequency of emotional reactions in soldiers and the effect of stress factors of military environment on intensification of them, it is necessary to take educational and administrative measures to prevent, control and reduce the mentioned reactions of soldiers during their training.

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