



**ORIGINAL ARTICLE**

## **The effect of Military Training on Conscript Soldiers' General Health**

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### **ABSTRACT**

*Specific psychological stress and pressure in youth especially during military service can endanger the conscript soldiers' physical and mental health. Therefore, conducting studies on this issue is necessary and the present study was carried out to determine the effect of military training on the conscript soldiers' general health. It was a quasi-experimental study in which the conscript soldiers' general health was examined before and after the military training. The study population consisted of all conscript soldiers who were training in military training camps. Simple random sampling was conducted to select the target sample that included 373 participants. General Health Questionnaire-28 (GHQ-28) was utilized as the data collection instrument. The collected data were analyzed through descriptive and inferential statistical methods. The results indicated that there was a significant difference between the general health scores before and after the military training ( $p < 0.0001$ ). After the military training, a decrease was observed in the mean scores of all general health indicators including physical symptoms, anxiety and sleep disorder, social dysfunction, depression, and suicidal tendency. The results of the present study showed that military training had a favorable effect on all general health indicators. Military authorities can use the findings of the study on the relation among demographic characteristics and the conscript soldiers' general health in order to improve the military training conditions.*

**Keywords:** general health; military training; conscript soldiers

Received 18.12.2014

Revised 19.01.2015

Accepted 21.01.2015

### **INTRODUCTION**

Boys are drafted into military service at the age of 20-30, in other words it is concurrent with youth. Foresight, passion, love, education, and future occupation shape up in this period. In most cultures, youth is associated with holding parties and having fun; however, encountering specific changes in life like marriage, finding a job, and being drafted into military service in this period can cause much stress and anxiety. Such anxiety can be a prelude to a variety of psychological disorders [1-6]. The youth account for 33% of the society, a large percent of them is drafted to conscript military service so that they guard and protect the Islamic Republic [1]. Despite of the advantages of this new period, it is also associated with lots of stress which can lead to changes in daily habits, changes in eating habits, restriction in choice and freedom, compulsory and frequent changes in place of residence, changes in sleeping habits, and problems with commanders and fellow soldiers [2-3]. Particular features and conditions of this period can create different psychological issues for the conscript soldiers. The results of different studies indicate an increase in drug consumption in the youth and prevalence of psychological disorders among the conscript soldiers as a result of joining the military service [7-8]. After finishing their military service, the soldiers are considered as the skilled and active human resources who can serve their society and families in different aspects; therefore, saving and enhancing their general health is vitally significant. In so doing, identifying their psychological state during the military service and providing them with necessary psychological care, support, and prevention are necessary in order to prevent psychological damages. As a result, military authorities and commanders should constantly evaluate the conditions of the military service and provide appropriate programs accordingly. The results of the study conducted by Farahi Buzjani *et al* (2009) on the causes of behavioral problems among conscript soldiers in military camps

indicated that psychological factors, organizational structure, and the way the commanders interact with the soldiers were among the most important reasons for such behavioral problems[9].

Most military organizations utilize the results of psychological tests to choose the soldiers for different duties in accordance to their intelligence and psychological capacities. The first general psychological tests for military forces were designed in the U.S. in 1917-1918 [2]). Military training instructors have also evaluated the stress and pressure up to death threshold on the soldiers during military training [9].

On the one hand, the youth period involves psychological stress and pressure and on the other hand, the beginning of military service causes great changes in the individual's life schedule and is associated with lots of stress and difficulty. As a result, military service leads to anxiety to the youth and their families. Therefore, the present study was conducted in order to examine the conscript soldiers' general health and respond to the questions and clear up the ambiguities involved with military service. The researchers hope that the results and findings of the present study will enhance the level of general health among the conscript soldiers.

## METHOD

The present research was a quasi-experimental one-group study consisting of one phase, in which the conscript soldiers' emotional reactions were examined before and after military training in the summer 2013. The study population consisted of all conscript soldiers who were training in military training camps. The study sample was selected through simple random sampling. To determine the sample size, the similar study (10) was utilized and the proportion of emotional reactions among the soldiers was calculated as 0.7 (p) and with a confidence level of 95%, the sample size was assigned to be 322 participants. Due to the possibility of loss in the sample size, 390 individuals were selected. Because 17 participants had not completed the questionnaires well, the final sample included 373 individuals. The data collection instrument had two sections. The first section of the researcher-made questionnaire was related to the soldiers' demographic information (age, education, marital status, history of drug consumption, place of birth, race, military training camp, and history of psychological diseases in family). The second section was the General Health Questionnaire (GHQ-28) that was used to measure the soldiers' general health. This questionnaire was first designed by Goldberg in 1972. It original form includes 60 questions and has three forms of 12, 28, and 60 questions and has ever since been translated into 38 languages and applied in 70 countries and its reliability and validity have been affirmed in different studies in Iran [11-12]. The 28-question form of the questionnaire that was utilized in the present study has four scales of A, B, C, and D each of which includes 7 questions that measure four types of non-psychotic disorders including physical symptoms, anxiety and sleeping disorder, social dysfunction, and depression and suicidal tendency. The subscales just provide the symptoms and do not necessarily equal to psychological diagnosis. To score each item Likert scoring method was applied and each item was assigned a score between 0 and 3, which resulted in a total score of between 0 and 84. In order to carry out the research, after gaining the necessary permits from and coordinating with the authorities, the researchers referred to the target camps. Afterwards, the aim of the study was explained to the conscript soldiers and their consent was gained, the questionnaires were distributed and the data were collected. They were also assured that their information will remain confidential. The collected data were analyzed through descriptive and inferential statistics using SPSS 19.0.

## RESULTS

In regard with demographic characteristics of the 373 participants, the age range was 20-29 with an average of 24.80 and standard deviation of 1.56, 88.2% of them (329 individuals) were single and 51.2% (191 individuals) had university degrees. In regard with the history of drug consumption, 91.2% (340 individuals) did not mention such a history. Regarding their places of residence, they were from 27 provinces of the country. In terms of their races, 13.4% (50 individuals) were Kurds, 11% (41 individuals) were Baloch, 4% (15 individuals) were Lor, 0.5% (2 individuals) were Gilaki, 47.2% (176 individuals) were Persian, 0.3% (1 individual) were Arab, 23.3% (87 individuals) were Azeri, and 0.3% (1 individual) were Taleshi.

Comparing the general health mean scores before and after the military training (Table 1) indicates a significant difference ( $p<0.0001$ ) between these two stages. It also shows that after the military training, there was a drop in the level of the general health indicators like physical symptoms, anxiety and sleep disorder, social dysfunction, depression, and suicidal tendency.

Group	Before Training	After Training	Wilcoxon Test
	Mean and SD	Mean and SD	
General Health			
Physical Symptoms	0.58±0.80	0.21±0.46	$P<0.0001$
Anxiety and Sleep Disorder	0.72±0.84	0.24±0.53	$P<0.0001$

Social Dysfunction	0.87±0.82	0.41±0.61	<i>P</i> <0.0001
Depression, and Suicidal Tendency	0.48±0.84	0.11±0.44	<i>P</i> <0.0001
Total General Health	0.73±0.83	0.23±0.53	<i>P</i> <0.0001

Table 2 presents the relation between the participants' general health and their demographic characteristics. The results indicated that except for marital status, general health had no significant relation with other demographic characteristics.

General Health Scores	General Health Scores		
	Test Statistics	df	p
Demographic Data			
Marital Status	4.87	6	0.56
Education	41.26	6	<0.0001
History of Drug Consumption	26.39	6	<0.0001
Place of Residence	110.48	78	0.009
Race	43.73	21	0.003

## DISCUSSION

The results of the participants' demographic characteristics like age, marital status, and education are in agreement with those conducted on Iranian conscript soldiers [1,2,9,10,13,14]. This indicates that the participants of the present study are representative of the whole population. The results of the study indicated that the general health indicators improved after the military training. To justify this phenomenon, two reasons can be referred to. First, the high mean scores of physical symptoms, anxiety and sleeping disorder, social dysfunction, depression and suicidal tendency in the beginning of the military training are natural and due to entrance to an unfamiliar environment, which decrease as the soldiers gradually acclimatize to the new environment. Second, since the military training period did not have any unfavorable change in the soldiers' general health but it was improved, which is as a result of the favorable effects of the military training on the participants. These findings are in line with the study conducted by Daneshfar and Zakeri [1], in which the effects of military training period on the conscript soldiers' psychological empowerment were investigated and the results indicated that the military training influences the soldiers' psychological empowerment and boosts them in regard with confidence and competence. The results of the study conducted by Fakourian *et al* [15] on the effect of a selective training period on fitness, mental health, and behavior among cadets were not in agreement with those of the present study. The results of their study indicated that although the military training period affected the participants' fitness, it had not any significant effect on their mental health and behavior. The results of this study are not in agreement with those of the study conducted by Khadem Al-Hosein [6] on the effect of military training on the cadets' mental health, either. In this study, GHQ-28 questionnaire was utilized; however, the difference between the soldiers' mental health before and after the period was not significant but the differences in physical symptoms and social function were significant. A reduction in suicidal tendency among soldiers indicates improvement in their mental health. Anisi *et al* [16] have also conducted a study on this issue entitled, "prevalence of suicidal tendency among Tehran's conscript soldiers and the related causes". They reported that the rate of suicidal tendency among the soldiers was 5.8% and this tendency was higher among soldiers who had less general health than those with appropriate general health. These results are not in line with those of the study conducted by Kamrowska and Florkowski [18] on the compatibility disorders of 91 conscript soldiers in a military hospital. In this study, it was reported that before the military training more than half of the soldiers who were living big cities had compatibility disorders. There was also a significant difference between compatibility disorder and military training. This difference might be due to social, cultural, and living conditions between the populations of the two studies. Moreover, this study was conducted on those soldiers who had referred to a military hospital.

While examining the relation between demographic characteristics and the participants' general health, a significant relation was observed among general health and demographic variables of education, history of drug consumption, place of residence, and race. However, it had no significant relation with marital status. These findings are in line with the study conducted by Haji Amini *et al* [10]. In their study, there was a significant relation among education, history of drug consumption, and depression; however, there was no significant relation between marital status and psychological reactions like stress, anxiety, and depression [10]. In Farsi's study [18], no significant relation was observed between general health and its subscales, either. Moreover, there was no significant relation between education and depression, which is not in line with the results of the present study [18].

## CONCLUSION

The results of the present study indicated that the military training period had a favorable effect on all general health indicators. In other words, the conditions of the military training period, theoretical and

practical instructions and lessons, and the environmental circumstances in military camps can enhance the conscript soldiers' general health. These findings can be utilized to enhance the society's awareness and decrease the soldiers and their families' concern about drafting their youth into military service. The significant relation of education, history of drug consumption, place of residence, and race with general health indicates that the curriculum of the military training period should be regulated and designed according to the soldiers' education, those who have a history of drug consumption should be identified and provide them with psychological counseling services during the period, and the place of the military service should be considered in accordance to the soldiers' places of residence.

#### ACKNOWLEDGEMENT

The research team should express their deepest gratitude to the authorities of the military camps and the conscript soldiers who cooperated with and participated in the study. Great thanks also go to the authorities of the nursing faculty and the Behavioral Sciences Research Center, Baqiyatallah University of Medical Sciences, who financed the investigation.

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#### CITATION OF THIS ARTICLE

Vahedian A, Khaghanizadeh M, Nourolohi F M, Anisi J. The effect of Military Training on Conscript Soldiers' General Health. *Bull. Env. Pharmacol. Life Sci.*, Vol 4 [3] February 2015: 123-126.