

# Comparison of personnel's lifestyle, quality of life and mental health in two military and non-military universities

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## Abstract

**Aims:** Studies performed on military structure indicate psychological issues which may occur considering the nature of military jobs. The present study was performed with the aim of comparing the lifestyle, quality of life and mental health of two military and non-military universities' personnel.

**Methods:** This descriptive comparative study was performed in year 2008. 344 (131 men, 213 women) personnel of two universities of Tehran were selected by available sampling method and completed Millon Clinical Multi-axial Inventory III (MCMI III), Health Promoting Lifestyle Profile II (HPLP II) and WHO Quality of Life-Brief (WHOQOL-BREF) questionnaire. Data was analyzed by SPSS 11.5 software, using descriptive statistical methods and independent T-test.

**Results:** Comparing mental health variables, there was significant difference between two groups in majority of mental health subscales and the military university personnel had higher mental health. No significant difference was found in terms of lifestyle and quality of life between the two groups.

**Conclusion:** Military university personnel have higher mental health compared to non-military university personnel, but there is no significant difference in lifestyle and quality of life between the two groups. Higher levels of mental health in personnel of the military university can be related to performing preventive procedures for mental health improvement as well as job security and clear promotion processes.

**Keywords:** Mental Health, lifestyle, Quality of life, University

## Introduction

In the present world, which is also called the world organizations, committed and skilled human resources could be the most important factors in reaching the organizational goals. Special conditions of the Iranian organizations that now are stepping toward the stability and have entered the heavy realm of competition with international counterparts after passing the vicissitudinous period after Islamic revolution requires double attention to human resources for these organizations' survival and growing stable movement in this direction. When a military organization with its own military forces and sensibilities is addressed, the importance of this issue will be doubled. Although the military organization and force, at first glance brings in mind the armed force and organizations with merely defensive purpose, it should not be ignored that the scope of these organizations in the fields of science and technology, industry, services, etc. is beyond such subjectivity. However, despite the multiplicity in the areas of activity, the connecting ring of all these organizations is adherence to the military high level policies. Therefore, employees' activity in the environment that lacks military equipment and seems

to be non-military, is called military due to the following up of these policies. Activity within these policies' framework causes the differentiation of these organizations from similar non-military organizations and on the other hand creates a similar situation for forces of these organizations and armed and defensive forces.

Military forces in response to attacks, riots and natural disasters are usually the first group who are called. These missions that may last for a long time mainly lead to separation of these forces from their family and familial life [1]. On the other hand, military involvement in war as well as war time, [2, 3], can be followed by related physical and mental effects long after the war [4, 5]. Injured patients from chemical attacks or patients with post-traumatic stress disorder are evidence of this claim. Military families or families in which one of their members work for the military forces (especially if they had been involved in the war) also comprise the population who are at the risk of mental health issues [6, 7]. This problem can cause mental health problems in military forces through vicious cycle. Therefore, mental health threatening factors that are associated with their job condition [8, 9, 10, 11] and the nature and sensitivity of their job, make the investigation and covering of

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this group's mental health very important. Relying of society on the healthy and ready military forces to meet the independence, liberty and security of society, shows the necessity of maintaining and promoting mental health in military personnel. In Iran, due to long-term Iran-Iraq war, many military personnel who were present at the front can be exposed to risk of mental health factors. This problem is not specifically for the experienced forces and a significant proportion of people who enter the military forces, face dismissal from service [12].

Review of definitions of mental health and quality of life dimensions, makes the relationship between these two variables more apparent. World Health Organization in 1948 defined mental health as a complete state of social, mental, and physical welfare and not merely absence of disease or disability [13]. On the other hand, this organization defined the quality of life as person's perception of his position in his life, in cultural context and value system in which he lives and in connection with goals, aspirations, priorities and criteria [14]. This definition enters the individual's evaluation of his satisfaction or dissatisfaction with his capabilities and his own psychological, social, occupational and physical activities. Therefore, psychological, social and physical common factors of these definitions in connection with person can indicate the interaction of these two factors. A more accurate expression, by considering the welfare and objective satisfaction components, and functional status and context factor as the three components in quality of life, the overlap of the first two components with mental health is evident [15]. Previous Researches also had mentioned the reduction in the quality of life following the incidence of psychological concerns [16, 17, 18, and 19] and a significant negative correlation between depression and quality of life [20].

Lifestyle as an indicator of physical health which is based on what is accepted by public, i.e. the bilateral relationship between body and mind, could be predictors of mental health. Studies have shown that lifestyles are associated with physical and mental health status and quality of life in adults [21, 22, and 23]. Proper sport and nutrition in addition to physical health have positive effect on mental health [24]. Also suitable lifestyle such as eating breakfast daily or regular participation in physical exercises in a group of factory workers have been identified as being in direct correlation with mental health [23].

The important role of mental health in the function of military forces is being increasingly recognized [25]. However, Chappelle and Lumley [26] in their studies,

instead of relying on previous assumptions or data that may not be connected to new events, mention to outstanding issues of mental health, solely in connection with the battlefield which emphasizes the necessity of investigation of mental health in military issue specifically. Countries new policies regarding the mental health promotion for the public segments of society such as mental health parity legislation in the United States [27, 28] on one hand, and effectiveness of lifestyle intervention programs in developing countries [29] On the other hand, and specific relevant actions in connection with the military forces [30] also emphasize the necessity of this issue.

Despite the limited information existed regarding lifestyle, quality of life and mental health of various parts of society there, a certain study in consideration of these variables between military forces has not been done. Accordingly, this study is essential and necessary in order to maintain health and promote mental health in these forces and their families. In this study, according to the demands of military organizations, differences in the specific objectives of higher levels of the organization with other organizations can be directly effective on lifestyle, quality of life and mental health variables in personnel of this organization. Therefore, comparing these variables in military and nonmilitary employees' organizational groups will may propose comprehensive information on the listed variables in these groups and provide the possibility to increase the strengths of both groups. This research could be the basis of healthy life, basis for psychological services, psychotherapy and counseling for military organizational personnel and provide the required readiness to support and defend the country by these groups.

Riddle et al. [8] in their research regarding the prevalence of mental disorders in the U.S. military, concluded that the military forces belonging to the subgroups of women, lower age, low education, single, white, with short-term and volunteers serving are at high risk of some psychological disorders. Hoge et al. [2] in their study of U.S. military forces who were sent for military operations to Iraq and Afghanistan realized the significant amount of risk associated with mental health issues in these groups. Dlugosz et al. [4] also after investigation of U.S. military forces that took part in the Persian Gulf War found that these people were at risk of psychiatric disorders after the war, including stress, disorders related to abuse of narcotics and disorders related to consumption of alcohol. Brooks et al. [5] in their study of mental health of soldiers deployed to Vietnam War

obtained a poor mental health in this group compared to troops deployed to other sites and the presence of adverse effects of war on mental health in younger soldiers compared to their older counterparts. Tekbas et al. [11] in their study of military service soldiers in Turkey concluded that 29.9% of these soldiers had depressive symptoms that were significant in comparison with the general population of Turkey. Soldiers, who smoked, consumed alcohol, had lower incomes and were not attracted to sports, obtained higher scores on depression tests. Also, Wu et al. [10] in their investigation of the lifestyle of military service soldiers in Taiwan found that these soldiers significantly had tendency to smoking, alcohol and chewing Snus. This tendency was higher among younger and lower educated soldiers.

Eaton et al. [7] in a research studied mental health in wives of soldiers who had taken part in Iraq and Afghanistan wars, and concluded that the wives of soldiers suffered from mental health problems the same as soldiers'. However, the amount of mental health care in soldiers' wives is less than soldiers. Burrell et al. [1] in another research evaluated the relationship between military lifestyle demands in four domains of 1) risk of injury or death, 2) changing places constantly, 3) periodic separation and 4) residence in foreign countries with the psychological and physical well-being, army satisfaction and marital satisfaction and concluded that the separation will negatively correlate with the outcome of each four mentioned above demands, while staying in foreign countries negatively correlates with the psychological and physical well-being, fear of physical safety is negatively correlated with physical well-being and impact of place changing is negatively correlated with military satisfaction. Rohall et al. [9] investigated the effects of adjusting the force in the Russian army in mid-1990 on quality of life and mental health of four groups of military members and their spouses. These four groups were 1) those who were not subjected to force adjustment, 2) those who still remained in the army, but were willing to leave the army, 3) the group who had left the army and had found a nonmilitary job and 4) group who had left the army and still had not found another job. In this study, contrary to expectation, the third group reported higher quality of life and significant differences was not found between group 1 and groups 4. Mentioned issues were also true for the spouses of this group. In relation to mental health those who remained in the army but were waiting for departure, reported the highest rate of depression, anxiety and hostility. While those who had been entered the nonmilitary occupations reflected the

lowest rate of psychological disturbance.

Yan et al. [31] in their study of new Chinese army troops achieved the conclusion that mental health in this group like the mental health in army population is higher than general population. Hotop et al. [3], after studying the British troops deployed to Iraq in 2003 found that there is only association between military save forces deployed to war and this relation has not been observed in common military forces. Forman-Hoffman et al [32] in their study of deployed troops to the first Persian Gulf War concluded that these soldiers may more be at risk of widespread chronic pain, which by itself is placed in relationship with lower level of health and quality of life. Schwerin et al [33] also investigated soldiers with post-traumatic stress disorder and concluded that the symptoms of this disorder are associated with low level quality of life. Schwerin et al [34] in their assessment of quality of life programs in Navy mention to the positive effect of these programs. Atlantis et al. [35] research results also show the effect of therapies based on one-dimensional or multi-dimensional physical exercises on depression symptoms and on improvement of stress symptoms and quality of life.

As it is observed, researches conducted in the context of military mainly indicate psychological issues that may occur according to the demands of military occupation. Accordingly, this study has compared the difference between dependent and non-military dependent university personnel based on these groups' locations in two different work environment (that military context highlights this difference) and by considering the effect of job environment on mentioned variables. The aim of this study was to compare lifestyle, quality of life and mental health in dependent and non-military dependent university personnel.

## Methods

This descriptive study was conducted in 2008. Total of 344 employees of two universities (one military and one nonmilitary university) were selected as the sample of the study and the sample volume was determined by Krejcie and Morgan table [36]. Based on population ratio of the two organizations, 144 individuals (69 males, 75 females) from Military University and 200 individuals (62 males, 138 females) from nonmilitary university were selected through available sampling method. These samples who were not scientific members of two universities, were matched based on three main groups of staff forces, health-care and support technical staff. It is

necessary to mention the fact that because of some limitations, receiving accurate statistics and more detailed personal and professional information about employees was not possible. Among the 344 presented questionnaires to employees, nine of questionnaires were deleted from others because of their non-clarity. After deleting of non-clear questionnaires a total of 335 questionnaires were analyzed.

After the coordination with both organizations administrative, the questionnaires were distributed among subjects individually and after justifying the participants about the research and making them to be sure about the confidence of responses and that there was no need for mentioning their name and organization, they were emphasized to reply completely to the questions.

For assessing mental health, the third version of Clinical Multi-axial Inventory III Questionnaire (MCMI-III) which has been most widely used in recent years was used. The main objective in making this questionnaire has been making short and small questionnaire and encourage its use while maintaining efficiency in the detection a range of disorders. This questionnaire measures the clinical patterns of personality including schizoid, retiring, depressed, dependent, dramatic, narcissistic, antisocial, sadistic, obsessive, negative viewer and self-harmer characters, severe personality injuries, including schizotypal personality, borderline and paranoid, the clinical syndrome including anxiety disorder, ADHD disorder, bipolar disorder, dysthymia, alcohol dependence, drug dependence, post-traumatic stress disorder and severe clinical symptoms include thought disorder, delusional disorder, major depression [37]. Answering to the questions of this questionnaire takes about 20 to 30 minutes. The score of this questionnaire is from zero to 115 that the score over 85 is likely refers to the range of pathological disorders [38]. The original English test validity has been shown through correlation with clinical specialists ranking, the similar tests that measure the same structures and statistical methods and its reliability has been calculated through alpha coefficient between 0.67 and 0.82 and through test-retest which has been 0.88 to 0.93 [39]. For evaluating the credit of the questionnaire, after selecting 30 questionnaires from all of questionnaires, Chronbach's alpha method was used and the alpha coefficient of 0.93 was obtained for this questionnaire.

For evaluation of lifestyle the edited version of Health Promoting Lifestyle Profile II (HPLP II) was used. This questionnaire included 52 questions that in the quartet Likert scale, measures the current health

promotion behaviors based on health promotion model [41] in six sub-scales of spiritual growth, responsibility in the health, nutrition, physical activity, stress management and relationships between individual. Content validity of this questionnaire was approved by four scientific committee members who were familiar with the history of health promotion after applying some changes and Adams et al have also reported the validity coefficient of this questionnaire 0.94 [41]. Alpha coefficient for Health Promoting Lifestyle Profile II questionnaire was calculated 0.96. Quality of life was also measured through the World Health Organization questionnaire-Short Form (WHOQOL-BREF) [42] which is the short form of WHOQOL-100 questionnaire and included 26 questions in five Likert scale parts. This questionnaire measures the four domains of physical health, psychology, social relationship and environment in 24 integral procedures in these areas. Physical area includes daily life activities, dependence on pharmaceuticals and medical assistance, energy and fatigue, dynamics, pain and discomfort, sleep and rest and working capacity. Psychological areas includes body image and appearance, negative feelings, positive emotions, self-esteem, spirituality, religion, Personal beliefs and thinking, learning, memory and concentration. Social relationship domain includes

Personal social relations, social support and sexual activity, and finally environmental areas includes financial resources, freedom, physical safety and security, availability and quality of social and health care, home environment, opportunities for learning new skills and information, participation rates and opportunities of recreational activities, physical environment (pollution, noise, traffic, climate) and transportation.

Skevington et al. [43] in a report by the World Health Organization have mentioned the credit of this questionnaire 0.7 between the sample groups of 23 countries and have confirmed its validity. Obtained data were statistically analyzed by independent t test after providing the relevant descriptive statistics and approving the homogeneity variance hypothesis through Levine test.

## Results

In the comparison of mental health variables' mean, there was significant difference in two groups in subscales of schizoid, depressed, dramatic, narcissistic, cynical, schizotypal, paranoid, anxiety disorders, somatoform, manic, post-traumatic stress

disorder, thought disorder, major depression and delusional disorder (Table 1).

**Table 1-** Comparing mental health variables in two groups based on independent T-test (1=Military University, 2=Non-military university)

Mental health variables	Groups	Mean	SD	T	Level of significance	
Clinical personality patterns	Schizoid	1	30.26	22.17	2.38	0.018
		2	36.00	21.54		
	Retired	1	30.07	20.28	1.75	0.080
		2	34.01	20.27		
	Depressed	1	36.49	27.02	2.45	0.015
		2	44.01	28.20		
	Dependent	1	22.94	17.27	1.95	0.052
		2	26.88	19.59		
	Performance	1	43.97	24.56	3.22	0.001
		2	52.51	23.44		
	Narcissistic	1	47.10	17.34	2.01	0.046
		2	51.20	19.24		
	Antisocial	1	32.25	24.27	0.33	0.738
		2	32.99	16.41		
	Other teaser	1	30.24	17.53	0.58	0.560
		2	31.34	16.55		
Obsessive	1	60.31	17.99	0.47	0.641	
	2	61.23	17.49			
Negative viewer	1	35.84	22.86	2.04	0.042	
	2	41.02	22.87			
Self-teaser	1	26.33	18.75	1.51	0.132	
	2	29.63	20.41			
Severe personality disorder	Schizotypal	1	27.59	18.63	3.60	0.0001
		2	34.90	18.17		
	Borderline	1	32.54	17.32	1.23	0.221
2		34.96	18.22			
Paranoid	1	33.94	21.90	2.82	0.005	
	2	40.41	19.02			
Anxiety disorder	1	33.09	24.17	3.31	0.001	
	2	41.66	22.79			
Somatoform disorder	1	32.58	22.26	2.10	0.036	
	2	37.85	22.91			
Mania	1	20.47	22.64	3.27	0.001	
	2	28.76	22.99			
Dysthymia	1	30.84	19.42	1.73	0.084	
	2	34.64	20.09			
Alcohol dependence	1	15.79	11.86	1.38	0.169	
	2	17.69	12.79			
Drug dependence	1	19.07	12.67	0.67	0.500	
	2	20.04	13.19			
Post-Traumatic Stress Disorder	1	20.03	22.11	2.78	0.006	
	2	27.35	25.96			
Severe syndrome	Thought disorder	1	33.67	22.94	3.05	0.002
		2	44.10	21.30		
	Major depression	1	30.38	24.34	1.98	0.048
		2	35.66	23.82		
Delusional disorder	1	21.86	20.05	2.20	0.028	
	2	26.71	19.79			

In other subscale significant difference was not observed. In cases where there was a difference, the rate of mental health in personnel of the military university was more than nonmilitary university staff (In the mental health variable, lower scores mean

higher mental health).

In variables of lifestyle and quality of life and related subscales, the difference between the mean of two groups were not significant; therefore, there was no difference between lifestyle and quality of life in two groups (Tables 2 and 3).

**Table 2-** Comparing the mean of life style and related subscales in two groups based on independent T-test (1=Military University, 2=Non-military university)

Variable	Group	Mean	SD	T	Level of significance
Lifestyle	1	2.55	0.35	1.50	0.13
	2	2.61	0.34		
Responsibility in health	1	2.41	0.52	1.33	0.18
	2	2.33	0.53		
Physical activity	1	1.85	0.57	0.34	0.73
	2	1.87	0.57		
Nutrition	1	2.42	0.39	0.76	0.45
	2	2.46	0.45		
Spiritual growth	1	2.76	0.56	0.79	0.43
	2	2.81	0.51		
Personal relationship	1	2.64	0.43	0.92	0.36
	2	2.68	0.45		
Stress management	1	2.17	0.45	1.01	0.31
	2	2.22	0.47		

**Table 3-** Comparing the quality of life and related subscales in two groups based on independent T-test (1=Military University, 2=Non-military university)

Variable	Group	Mean	SD	T	Level of significance
Quality of life	1	14.12	2.32	0.99	0.32
	2	13.88	2.15		
Physical health	1	15.21	2.54	0.53	0.60
	2	15.06	2.46		
Psychology	1	13.82	2.84	0.41	0.69
	2	13.69	2.76		
Social relationship	1	14.33	3.04	0.11	0.91
	2	14.30	2.99		
Environment	1	13.17	2.53	1.80	0.07
	2	12.63	2.58		

## Discussion

Results indicate higher mental health in military university personnel in comparison with nonmilitary university one. This difference despite the previous studies which mainly has mentioned the potentiality for disorders in military organizations can indicate the double success of this organization in fulfilling the prevention and mental health promotion programs through considering the context and military history of this university. This finding is also consistent with findings of Yan et al. [31] that refer to the high mental health in military forces of China in comparison with

general population. In this regard type of employment in military forces can be mentioned in which despite the difficult process, after employment a person placed in system has higher job security and promotion is clearer compared to other administrative systems. These two factors of security and promotion are in direct relationship with personnel mental health in most of conducted studies [44, 45, 46]. Double attention to the employees' selection criteria in military organizations compared to other organizations which lead to employment of appropriate person and using him in appropriate job position can keep and promote the occupational satisfaction and subsequent mental health by itself. On the other hand, such selection with hiring people believe in organization's ideals and goals, leads to individual activities in homogeneous groups aligned with the goals and makes the work environment healthy regarding psychosocial issues. However, it should also be mentioned that the result in terms of comparison does not mean the absence or the low amount of psychological disorders in this group and for answering this question further research should be done in this field.

Despite the significant difference in mental health, significant difference was not seen in lifestyle and quality of life in the two groups. Differences in mental health despite the absence of difference in lifestyle and quality of life in two groups, is interesting. This point shows that mental health in military organization personnel in comparing with nonmilitary organization personnel is independent from material, welfare and livelihood issues, since if there was such difference, it would be observed in quality life variable which is influenced by above factors. Thus, it totally seems that military organization despite their potentially of disorders can make the steps beyond the nonmilitary organizations in providing mental health for their personnel through utilizing proper psychological interventions in the information giving and prevention and through proper organizational policies in selection and recruitment, organizational promotion and providing healthy environmental work.

According to the findings of this research, conducting researches with methods other than self-report questionnaires especially for the study of mental health (e.g., clinical interviews) can have valuable results if removing administrative, budget and time limitations. Also, implementation of methods for investigation the validity of presented responses to questions can have important results.

Generally it seems that interventions in cultural activities in increasing knowledge about lifestyle of

personnel and internalizing the healthy life style in this group and providing organizational policies in promotion of quality of life and teaching activities such as workshops in this issue can be effective in maintaining and increasing the staff's mental health.

## Conclusion

Mental health is higher in military university personnel than in nonmilitary university personnel, But there is no significant different in style and quality of life in both groups. The high mental health in military university staff can be due to implementing of prevention programs, promotion of mental health also job security and clear processes of job promotion.

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