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# The Comparison of Mental Health, Personality Traits, and Psychological Empowerment in the Two Groups of Newly Arrived and Discharged Soldiers

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#### Abstract

**Background:** Paying attention to psychological issues and characteristics of military service is one of the points that senior planners and commanders must assess. This study aimed at comparison of mental health, personality traits, and psychological empowerment in the two groups of newly arrived and discharged soldiers.

**Material and Method:** In the present correlational cross-sectional study, 604 soldiers serving in the barracks of Kerman province in 2021 were studied. Cluster sampling was used to select the statistical sample from the two barracks of Martyr Ashraf Ganjavii and Martyr Bahonar of the police force. Three characteristics of Mental Health, Personality Traits, and Psychological Empowerment were compared in the two groups. The Chi-Squared and independent t-tests were used in data analysis.

**Results:** Two hundred fifty-seven people (42.5%) were in the group of newly arrived soldiers, and 347 people (57.5%) were in the other group. The average scores of the discharged group in all aspects of mental health were lower than those of the newly arrived group (p<0.05). The average scores of two dimensions of neuroticism and extraversion in the discharged group were significantly higher than that of the newly arrived group (p<0.05). Also the two groups had a significant difference in competence score (p=0.048).

**Conclusion:** The mental health score in the discharged group was significantly lower than that of the newly arrived group. Consequently, it may be better to use psychological and clinical consultants and doctors for appropriate interventions to increase mental health, such as education, counseling, and psychotherapy.

Keywords: Military, Soldiers, Mental Health, Psychological, Empowerment

#### Introduction

The armed forces in any country consist of two main parts: "soldiers and staff." The central part of the armed forces is made up of soldiers[1]. Paying attention to psychological concerns and the characteristics of military service is one of the points that must be assessed and appraised by senior planners and commanders[2]. Military service can have incredible

values that increase national power, particularly in the military field[3, 4]. The public conscription organization annually recruits a large number of young people under the title of military service, and with appropriate planning, while preparing the recruits to deal with the offensive threats of the enemies and institutionalizing the components of soft power war in the recruits, reinforces their readiness to face the threats of enemies[3, 5]. It must be noted that the effects of this

training and improving the soldiers' ability to deal with the soft and hard threats of the enemies will have longterm effects on them[4, 6]. Psychological empowerment is one of the characteristics that must be inspected in course.Psychological empowerment is establishment of an inner feeling by the organization or the appropriate work environment in people so they can self-reliantly make decisions in their work and career process[7]. Likewise, personality traits are stable traits that define a person's behavior[8]. Personality has different dimensions, which in this era, based on the social life of soldiers with each other and its stark difference from the personal lives of people with their parents, may cause a person to have a conflict[9]. One of the characteristics associated with people's personalities is mental health, which has been examined in most articles in line with the relationship between personality characteristics and mental health[10]. Mental health is not only the lack of mental disorder but is also considered a state of well-being and comfort based on which each person considers himself capable and talented and can cope with the natural stresses of life, work usefully and successfully, and participate in society[11].Alteration and development in young people's individual and social functions are the attainments of public service[12].Based on past research, various variables have been considered in line with the positive effect of the military service or the adverse variables caused by the problems of the military service, and sometimes some research has been conducted showing the adverse effects of this period on somatic and mental health and other positive variables of soldiers[13, 14].

Nonetheless, despitebroad research in this field, the issue of the impact of military service on personality traits, mental health, and psychological empowerment has not yet been studied. Regarding the long period of living in barracks for soldiers (about two years), their distance from family, and living in a unique environment with military rules and characteristics, the researchers in this research try to examine these variables on soldiers. Does military service affect soldiers' psychological empowerment, personality traits, and mental health?

## **Materials and Methods**

In the present correlational cross-sectional study, the statistical population included all the soldiers serving in the barracks of Kerman province in 2021. The random cluster sampling method was used to select 604 soldiers to participate in the study. First, each of the three barracks (Martyr Ashraf Ganjavi, Martyr Bahonar of the police force in Baghin Kerman and Sirjan Naval Barracks) was considered as a cluster. Two barracks of Martyr Ashraf Ganjavi (Kerman 05) and Martyr Bahonar of the police force in Baghin Kerman were randomly selected. People were randomly selected from

each barrack according to the size (number of soldiers) of that barrack. In this way, by referring to the command center of the barracks and preparing the list of soldiers, the desired number was randomly selected. This project is registered with the AJA University of Medical Sciences with the code of ethics (IR.AJAUMS.REC.1400.115).

To determine the sample size, the average estimation formula (mental health in soldiers) was used  $(n = S^2 Z^2/d^2)$ , where S is equal to the standard deviation of the mental health score, which, according to a similar study, is equal to 12.5d was considered as the error rate in estimating the community average equal to 1 unit. Finally, the sample size was calculated to be 605 people. However, since there was a possibility of non-cooperation, a more significant number of them were invited to study. Lastly, 604 people agreed to complete the questionnaire [15]. The inclusion criteria included being a soldier of one of the barracks of Kerman province and full consent to participate in the study, and incomplete completion of the questionnaires was considered the exclusion criteria. In the present study, the soldiers whose service period was less than six months (newly arrived) were compared with the rest (discharged). The data collection tool included a demographic information checklist, a Spreitzer psychological empowerment questionnaire, a General Health Questionnaire (GHQ-28), and a personality traits questionnaire (Neuroticism, Extraversion, and Openness to experience -NEO). In the checklist, questions were related to age (years), length of service (months), level of education (undergraduate, diploma, associate, bachelor's, master's, and doctorate), marital status (single and married), and completion of the training Spreitzer's psychological course (yes or no). empowerment questionnaire was designed by Spreitzer in 1995[16]. There are many versions of this questionnaire, the most famous of which is the 15question version. The questions in this version are graded on a five-point Likert scale from 1 to 5, from completely disagree to agree. This questionnaire has five dimensions, including competence (questions 1 to 3), self-determination (questions 4 to 6), impact (questions 7 to 9), meaning (questions 10 to 12), and trust (questions 13 to 15). To obtain the score of each dimension, the sum of the questions related to that dimension, and to obtain the total score of the questionnaire, the sum of the scores of all the questions are added together. Higher scores designate the more extraordinary ability of the organization to empower employees. In Gholami et al.'s research, Cronbach's alpha method was used to determine the reliability of the questionnaire, and its alpha value was 0.95[17]. In Abdullahi et al.'s research, Cronbach's alpha for the psychological empowerment questionnaire was also calculated, and its value was 0.59 for competence, 0.81

for self-determination, 0.84 for impact, 0.89 for meaning, and 0.88 for trust. It can be supposed that the questionnaire has acceptable stability and reliability[18]. Goldberg designed the General Health Questionnaire (GHQ-28) in 1972[19]. The main questionnaire has 60 questions, but shortened versions with 30 questions, 28 questions, and 12 questions are also used. A 28-question version was used in the present research. The 28question questionnaire consists of 4 subscales. Questions 1 to 7 measure somatic symptoms, 8 to 14 measure anxiety and insomnia, 15 to 21 measure social dysfunction, and 22 to 28 measure severe depression. All questions are of four-choice type, and answers are scored based on the Likert scale as (0, 1, 2, and 3). Consequently, the person's score fluctuates from zero to 84. A lower score indicates better mental health. The validity and reliability of this questionnaire have been reported favorably in numerous studies[20]. The validity of the 28-question form of the questionnaire was reported as 0.70, 0.93, and 0.90. Montazeri et al. reported Cronbach's alpha coefficient as 0.87[21]. Yagoubi et al. reported the reliability coefficient of the questionnaire using Cronbach's alpha as 0.88[22].

The NEO Personality Inventory is one of the most comprehensive tests in the field of personality assessment. This questionnaire has 60 questions to evaluate five main personality factors. In some questions, the completely disagree option is given a score of 4, disagree is given a score of 3, indifferent is given a score of 2, agree is given a score of 1. The totally agree option is given a score of zero. Some other questions are scored in reverse. The NEO 5-factor test has been used worldwide and translated into Czechoslovak, Arabic, Dutch, French, German, Japanese, Norwegian, Polish, and Swedish for research McCree and Costa tested this purposes[23].

questionnaire on 208 American students, whose reliability coefficients were between 0.75 and 0.83[24]. In a study conducted on a sample of 2000 students from the universities of Tabriz, Shiraz, and the medical sciences universities of these two cities, the correlation coefficient of the five principal dimensions was between 0.56 and 0.87. Cronbach's alpha coefficients in the main factors of neuroticism, extraversion, openness, agreeableness, and conscientiousness are 0.86, 0.73, 0.56, 0.68, and 0.78, respectively[25].

Collected data were analyzed using the software SPSS version 21. Qualitative data were reported as numbers and percentages, and quantitative data were reported as mean and standard deviation. The Kolmogorov-Smirnov test was used to check the normality assumption of quantitative variables (psychological empowerment, personality traits, and mental health). The independent t-test was used to compare the averages in two groups. Then, the Chi-Squared test was used to Comparison the frequency distribution of marital status and education level in two groups of newly arrived and discharged soldiers. The significance level in the tests was considered to be 0.05.

#### Results

Six hundred-four people completed the questionnaires. Three hundred ninety people (64.6 percent) had passed the military training course, and 214 people (35.4 percent) were in the military training course when completing the questionnaire. In the present study, the researchers considered the people whose military service is less than or equal to 6 months as newly arrived soldiers. In this case, 257 people (42.5%) were in the newly arrived soldiers group, and 347 people (57.5%) were in the other group (Table 1).

Table 1. Frequency distribution of the soldiers participating in the study regarding the training course and length of service

Variable	Variable levels	N	%
Doga the military training accuracy	Yes	390	64.6
Pass the military training course -	No	214	35.4
Duration of military convice (months)	≤ 6 (Newly arrived group)	257	42.5
Duration of military service (months)	> 6 (Discharged group)	347	57.5

The two studied groups were compared regarding marital status and education level. 27.6% of the newly arrived group and 28.8% of the discharged group were married, and the rest were single, indicating that the two groups are homogeneous regarding marital status (P=0.748). However, in terms of education level, the

two groups were not homogeneous, and the frequency of people with higher education in the discharged group was higher than in the newly arrived group (P<0.001). Also, the average age of the discharged group was significantly higher than that of the newly arrived group (P=0.005) (Table 2).

**Table 2.** Comparison of the frequency distribution of marital status and education level in two groups of newly arrived and discharged soldiers

Variable	Variable levels	Newly arrived group (n=257)		<b>Discharged group</b> (n=347)		P-value
		N	%	N	%	r-value
Marketan	Single	186	72.4	247	71.2	0.748*
Marital status	Married	71	27.6	100	28.8	0.748*
	High school	44	17.1	25	7.2	
	Diploma	74	28.8	79	22.8	<0.001*
Level of education	Associate degree	49	19.1	47	13.5	
_	Bachelor's degree	76	29.6	162	46.7	
	Masters and Ph.D	14	5.4	34	9.8	
		Mean	SD	Mean	SD	
Age		23.29	3.31	24.03	3.01	0.005**

<sup>\*</sup> Chi Squared test; \*\* Independent Samples t test

Then, two groups were compared using an independent t-test regarding psychological empowerment and its dimensions (competence, self-determination, impact, meaning, and trust). Based on the results of this test, the average competency score of the newly arrived group was significantly half a point higher than that of the discharged group (P=0.048), but there was no significant difference between the two groups in terms of other dimensions and the overall empowerment score (P>0.05) (Table 3).

**Table 3.** Comparison of average scores of psychological empowerment and its dimensions in two groups of newly arrived and discharged soldiers

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Variable -	Newly arrived group (n=257)		Discharged group (n=347)		Dala*
	Mean	SD	Mean	SD	— P-value*
Competence	6.51	3.12	6.01	2.93	0.048
Self-determination	6.84	2.82	6.39	2.95	0.064
Impact	6.71	2.94	6.52	3.02	0.435
Meaning	6.72	2.89	6.70	2.92	0.922
Trust	6.72	3.03	6.54	3.10	0.475
Psychological empowerment	33.49	11.32	32.16	11.35	0.155

<sup>\*</sup>Independent Sample t-test

Via independent t-test, two groups were compared in terms of personality traits and their dimensions (neuroticism, extraversion, openness to new experiences, adaptability, and conscientiousness). Regarding the results of this test, the average scores of neuroticism (P=0.022) and extraversion (P=0.043) in

the group of discharged soldiers were significantly higher than those of the newly arrived. However, there was a significant difference between the two groups in terms of other dimensions (i.e., openness, adaptability, and conscientiousness), and the total score of personality traits was not observed (P>0.05) (Table 4).

**Table 4.** Comparison of average scores of personality traits and their dimensions in two groups of newly arrived and discharged soldiers

Variable	Newly arrived	Newly arrived group (n=257)		Discharged group (n=347)	
	Mean	SD	Mean	SD	- P-value*
Neuroticism	26.42	4.78	27.30	4.50	0.022
Extraversion	26.04	4.69	26.82	4.70	0.043
Openness to new experiences	26.12	4.47	26.27	4.87	0.702
Adaptability	26.59	4.34	26.84	4.53	0.488
Conscientiousness	27.27	4.19	27.25	4.25	0.937
Personality traits	132.44	16.37	134.47	16.35	0.132

<sup>\*</sup>Independent Samples t test

Likewise, two groups were compared in terms of mental health and its dimensions (somatic, anxiety and insomnia, social dysfunction, and severe depression) using an independent t-test. Based on the results of this test, the average scores of anxiety and insomnia (P=0.034), social dysfunction (P=0.023), severe depression (P=0.022), and the total score of mental

health (P=0.001) in the discharged group were significantly less than the new arrival group. While the mean score of the somatic dimension was lower in the discharged group than in the newly arrived group, this difference was not statistically significant (P=0.194) (Table 5).

**Table 5.** Comparison of average scores of mental health and its dimensions in two groups of newly arrived and discharged soldiers

Variable -	Newly Arrived group (n=257)		Discharged group (n=347)		— P value*
	Mean	SD	Mean	SD	- P value
Somatic	7.44	4.16	7.00	4.05	0.194
Anxiety and insomnia	7.54	4.08	6.84	4.00	0.034
Social dysfunction	8.42	4.09	7.65	4.13	0.023
Severe depression	7.29	4.30	6.50	4.08	0.022
Mental health	30.69	10.66	27.99	9.81	0.001

<sup>\*</sup>Independent Samples t test

#### Discussion

In the current study, in the beginning, two groups of newly arrived and discharged soldiers were compared in terms of psychological empowerment and its dimensions (competence, self-determination, impact, meaning, and trust). Though the average score of psychological empowerment and its dimensions in the newly arrived group was higher than the discharged group, only the mean competence score of the newly arrived group was significantly higher than the discharged group. However, the two groups did not significantly differ regarding other dimensions and overall empowerment scores and were almost the same. So, it cannot be said that military service affects the psychological empowerment of soldiers.

The results of this hypothesis are inconsistent with the results of Moradi et al. [26] and Heydari[27]. Unquestionably, this contradiction is undoubtedly the result of the difference in the job and life situation of veterans or nurses studied in these studies compared to soldiers. In this regard, Rawat et al. [28]. Designated a positive and significant relationship between psychological empowerment and commitment; of course, feeling worthy and meaningful in life are among variable components of psychological empowerment. If people feel empowered, it will have many organizational and personal benefits, such as creativity, proper performance, job satisfaction, mental health, and flexibility. Furthermore, capable people are self-controlling and self-regulating. Based on the results of the soldiers at the end of the course, due to the feeling of inadequacy and meaninglessness of life in the military, discrimination or humiliation of the soldiers, lack of attention to the expertise and ability of the soldiers, and failure to use the abilities and skills of the soldiers, the sense of competence, and as a result, the psychological empowerment during military service are reduced. Reconsidering and accepting legal weaknesses and gaps and the unquestioning control of the military environment are among the other factors that obliterate the talents and capabilities of the soldiers[29].

Likewise, two groups were compared regarding personality traits and dimensions (neuroticism, extraversion, openness to new experiences, adaptability, and conscientiousness). The results of this study revealed that the average scores of the discharged group

are higher than the newly arrived group in all dimensions except for the conscientiousness dimension. The difference in the mean scores of neuroticism and extraversion in the discharged group is significantly higher than that of the newly arrived soldiers group. Nonetheless, no significant difference was observed between the two groups regarding other dimensions (i.e., openness, adaptability, conscientiousness) and the total score of personality traits. These results are consistent with Maleki, Jalilian, and Meng[30-32]. Since neuroticism is one of the negative personality traits, only the military period positively affected the extraversion dimension of the soldiers, which is clear from the scores of the discharged soldiers in this variable. From Yung's point of view, extraversion and introversion are two significant aspects of human personality. When the attention to external objects and affairs is so extreme that voluntary actions and other basic human actions are not the result of mental evaluation but are the result of the relations of external affairs and factors, it is called extraversion. Extroverted people have more objective and external views and have higher practical activity. Perhaps military training or other technical training during the military period can be introduced as an influential factor in the extraversion of soldiers[33].

Likewise, these results are consistent with Yaghoubi's results because this researcher stated that soldiers in military units suffer from various psychological and behavioral problems, which can be caused by being away from family and strict military rules[34]. Likewise, social life or people with different ideological differences and different ways of thinking also cause neuroticism in soldiers. Unfavorable conditions of welfare facilities in educational centers, overuse of barracks, lack of proper planning in filling soldiers' free time, delay in granting leave to soldiers, especially in staging areas, improper organizational behavior of officials with soldiers, the imbalance of the number of soldiers with the needs of different parts are of the problems that Bozanjai has introduced as the main problems of the soldiers, which will have a destructive and negative effect on the mental health and behavioral disorders of the soldiers. Besides, Moradi has stated in the same direction that the violators and disciplined soldiers have a significant difference in observing the rules, which is caused by deviations and behavioral disorders in the violators. In proportion to the results of this hypothesis is the research of Mousavi and Mehboob, which revealed that the soldiers of the supply unit of the central area had shown signs of illness, such as anxiety, depression, hypochondriasis, and aggression to a moderate degree. Especially the fact that hypochondriasis by soldiers has been seen to a great extent [35].

Likewise, two groups were compared regarding mental health and its dimensions (somatic, anxiety and insomnia, social dysfunction and depression). The average scores of the discharged group were lower than those of the newly arrived group in all dimensions, and the difference in the average scores of all scores was significant except for the somatic dimension. As a result, it can be supposed that military service affects the soldiers' mental health. The current research results agree with the results of Nouri et al., Yacoubi, and Meng [32, 34, 36]. Punishments outside the disciplinary code framework, delay in payment of salaries and other administrative services, lack of rotation in difficult and harmful jobs, and inadequacy of the said laws in the engagement of soldiers, according to many researchers, cause suicide in soldiers or a military force related to mental disorders, family problems, incompatibility in the work environment. Indeed, it should be noted that the psychological conditions of youth, the spirit of courage, idealism, enthusiasm, and questioning, as well as the desire for freedom, are the reasons for the youth's lack of readiness to accept compulsory military service. Due to this mentality, many young people consider serving in the public service system a compulsory and preventive phenomenon. According to them, military service is an obstacle to continuing their education, marriage, employment, and ultimately finding a way to organize their lives[37].

With this explanation, in today's society, military service for young people brings many negative attitudes and dimensions from the very beginning, such as the loss of the golden opportunities of youth for growth and development, being an obstacle to marriage, employment, and organizing social life, ambiguity, and concern about how to perform service, place of service and potential accidents during the military period, limited education opportunities, feeling inferior and accepting a low social position in society, which can stem from the transformation of the military from a public duty to a negative obstacle in the eyes of the youth. Among the limitations of this study, we can point out the lack of examination of various confounders, the lack of inferring a causal relationship from descriptive studies, and the possibility of inaccuracy or honesty of the subjects in answering the questions of the questionnaires.

#### Conclusion

According to the results of this study, The two groups did not have significant differences in terms of psychological empowerment and personality traits. Still, the mental health score of the soldiers of the Discharged group was significantly lower than that of the Newly Arrived group. As a result, it may be necessary for planners and senior commanders to pay more attention to psychological issues and the characteristics of military service, and psychological and clinical counselors and doctors should be used for appropriate interventions to increase mental health, such as education, counseling, and psychotherapy.

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