

Average Military Service Length and Soldiers' General Health

Arsia Taghva¹; Masoud Azizi^{2,*}; Mohammad Hossein Rajabian³; Mojgan Khademi⁴; Abbas Omid³; Vahid Donyavi¹; Seyed Mozaffar Rohani³

¹Department of Psychiatry, Faculty of Medicine, Disaster and Military Psychiatry Research Center, AJA University of Medical Sciences, Tehran, IR Iran

²Department of English Language and Literature, University of Tehran, Tehran, IR Iran

³Department of Psychiatry, AJA University of Medical Sciences, Tehran, IR Iran

⁴Department of Psychiatry, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran

*Corresponding author: Masoud Azizi, Department of English Language and Literature, University of Tehran, Tehran, IR Iran. Tel: +98-22481806, Fax: +98-2188675806, E-mail: m.azizi@ut.ac.ir

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Background: Military service constitutes a stressful phase of an individual's life, which can have psychological consequences and affect both their mental and physical health. Different variables in this regard have been examined so far, but the role of average length of service has gone unnoticed to a great extent.

Objectives: As a result, the present study was an attempt to examine the effect of military service length on soldiers' mental health assessed by the use of the four subscales present in the General Health Questionnaire (GHQ-28).

Patients and Methods: Seven-hundred soldiers from three different randomly selected military bases in the North, Center, and South of Iran took part in the present study. Data were collected on the participants' demographical information as well as their general health condition using GHQ-28.

Results: Nearly 11 percent of the participants were diagnosed as having psychological disorders. The average service length for those diagnosed with psychological disorders was found to be 14.36 months (SD = 2.93), while it was only 8.5 months (SD = 1.89) in the case of healthy soldiers. Depressive symptoms were the most common problem among soldiers, with anxiety and social dysfunction standing second and third, respectively. The difference between the two groups' length of service was found statistically significant in the case of all the three constructs being examined ($p_{\text{depression}} = 0.00$, $p_{\text{anxiety}} = 0.03$, $p_{\text{social dysfunctioning}} = 0.01$).

Conclusions: Soldiers represent a major proportion of the male population in the society in Iran, and their health condition can indicate the society's general health condition. However, it seems that as one's length of service increases, the risk of suffering from psychological disorders is raised, which threatens the whole society's psychological health conditions. The results of the present study imply that in order to have healthier individuals in the army and the society as a result, authorities need to take action.

Keywords: Health; Soldiers; Depression; Anxiety; Military Service Length

1. Background

Life quality encompasses a number of dimensions, the most important of which being the physical, psychological, and social dimensions (1, 2). While the physical dimension is concerned with one's physical condition under the influence of any disease or treatment, the social dimension is about an individual's satisfaction with the social roles he or she plays and the social activities they might be involved in. On the other hand, the psychological aspect of life quality is concerned with the emotional evaluation of one's situation and is usually defined in terms of one's anxiety and depression (2, 3). In most countries, authorities use a number of criteria to evaluate the population's physical health and social welfare, which are revised from time to time. However, in the case of individuals' mental health, the complexity and definition resistance of the nature of this concept has resulted in its being neglected to a great extent (4). According to World Health Organization (WHO), mental health is about one's ability to have a bal-

anced relationship with others, change and improve his or her personal environment, and resolve his or her conflicts and wishes in an appropriate logical manner (5). It is believed that the epidemiology of diseases and individuals' sanitary needs are changing, with non-communicable diseases such as mental disorders rapidly replacing the communicable and infectious diseases (6). According to WHO estimates, the spread of mental disorders is pacing in the developing countries. However, in such countries' social and economic development planning, individuals' mental health receives not enough attention. This increase in the number of people suffering from such disorders is believed to be due to the high rate of population growth, the rapid expansion of city dwelling, the disruption of extended families, and economical problems in these countries (6). People may experience ups and downs in their life, which can affect their mental wellbeing due to different levels of experienced stress.

Serving in the army as one's military service can be regarded as an important, but stressful, phase of one's life, which can heavily affect both his physical and mental conditions (7, 8), though the majority of such influences manifest themselves much later in life (9). Post-traumatic stress disorder (PTSD), job stress, depression due to being away from family, and being punished by the commander due to one's inefficiency are only some of the problems soldiers may face during military service, which can result in many physical and mental disorders (10-13). For instance, Farsi et al. (14), having examined soldiers who had visited a health clinic in Tehran, observed that a large number of them were prone to suffering from one of the psychological disorders. In addition, Fathi Ashtiani et al. (15), examining 4,196 soldiers, observed that 16.2% of them had symptoms of psychological disorders. Married soldiers and the family breadwinners were observed to show more symptoms of such disorders. Obsessive-Compulsiveness, suspicion, sensitivity in interpersonal relations, and somatic disorders were among the most common problems observed (15). The prevalence of depression among soldiers is one of the most common psychological disorders, which can end up in suicidal thoughts. In a study examining the prevalence of suicidal thoughts and the related factors among soldiers, it was observed that 5.8% of the participants were experiencing such thoughts. Low educational level, previous record of committing suicide, dissatisfaction with their condition, and having conflict with other soldiers and their commanders were observed to have a significant relationship with experiencing such thoughts by soldiers (16). Iran is among the countries in which military service is mandatory for all male individuals except for those with some specific diseases or disabilities. All the male population must serve in the army when reaching 18, with the length of service being at least 18 months. Although the population of the soldiers does not represent the population of armed forces, which also includes the officially employed armed forces, soldiers represent a major proportion of the male population in the society in Iran, and their health condition can indicate the society's general health condition.

2. Objectives

Many factors playing a role in the development of mental disorders in soldiers have been examined so far; but the effect of the length of time being in service has been less delved into due to its covert nature (17). As a result, the present study was an attempt to explore the relationship between soldiers' mental health and their length of service.

3. Patients and Method

Seven-hundred conscripted soldiers, selected using convenience sampling, with a mean age of 19.37 years ($SD = 2.26$) from three different randomly-selected military

bases in the North, Center, and South of Iran took part in this study. Only 5% of them were married and the majority of them (96.3%) had a diploma or a higher degree. The main data collection tool was the 28-item version of the General Health Questionnaire (GHQ28). The original questionnaire, in 1972, comprised of 60 items. This questionnaire, as an indicator of one's psychological well-being, is usually used to assess the psychological aspect of the quality of life (18). GHQ, as a self-report instrument, is used to detect psychological disorders in the general population through assessing one's current state. It is sensitive to the short term psychological problems because it asks respondents whether their current state differs from their usual state (19). Goldberg and Hillier (20) derived the 28-item version from the original 60-item version of the questionnaire for research purposes using principal component analysis. Different versions of this questionnaire are available. The 30-item, 28-item, and 12-item versions are available in addition to the original 60-item version. In a study on 597 patients in Mexico City, no significant difference was observed among the 60, 30, and 28 item versions in their ability to screen individuals for their mental disorders (21). While other versions of the questionnaire only end up in one total score, the 28 item version, having four subscales, result in four different scores: somatic symptoms (items 1-7), anxiety/insomnia (items 8-14), social dysfunction (items 15-21), and severe depression (items 22-28). All items have a four-point scoring system of 'better/healthier than usual', 'same as usual', 'worse/more than usual', and 'much worse/more than usual'. The advocated system of scoring is a 0-0-1-1 method with higher scores showing a more severe condition. In order to analyze the data, a number of independent samples t tests were run to compare the average service length in individuals categorized as healthy and those identified as suffering from some kind of mental disorders.

4. Results

The obtained results showed that 10.9% of the participants (76 cases) had psychological disorder with 5% (35 cases) showing symptoms of depression, 3.9% (27 cases) showing symptoms of anxiety, and 2% (14 cases) showing symptoms of social dysfunction. The mean length of the service in those having a psychological disorder was 14.36 months ($SD = 2.93$), while it was only 8.5% ($SD = 1.89$) for those being classified as healthy. The difference between the two groups' length of service was found statistically significant ($p = 0.00$). For those with depression symptoms, the length of the military service was 16.46 months ($SD = 4.03$), while it was only 6.40 months ($SD = 1.67$) for healthy individuals. Regarding the Anxiety subscale, this number was 13.27 months ($SD = 2.93$) for the unhealthy soldiers, while it was 9.59 months ($SD = 3.23$) for the healthy individuals. Finally, in the case of the social dysfunction subscale, the mean length of service was observed

Table 1. The Results of the Screening Soldiers for their Psychological Disorders

	Psychological Disorder	Anxiety	Social Dysfunction	Depression
Positive				
No. (%)	76 (10.9)	27 (3.9)	14 (2.0)	35 (5.0)
Mean Service Length	14.36	13.27	16.76	16.46
Negative				
No. (%)	624 (89.1)	673 (96.1)	686 (98.0)	665 (95.0)
Mean Service Length	8.5	9.59	6.10	6.40

to be 16.76 months (SD = 4.54) for the unhealthy individuals and only 6.10 months (SD = 1.87) for the healthy soldiers. The difference between the two groups was found statistically significant in the case all the three measures mentioned above (P of depression = 0.00, P of anxiety = 0.03, P of social dysfunction = 0.01). Table 1 presents the related descriptive statistics.

5. Discussion

Depression has been predicted to be the second major cause of worldwide morbidity by 2020 (22). Being exposed to highly stressful life experiences is one of the most consistently documented risk factors for major depression (23), which is generally recognized as one of the major disorders in the US population (24). It is also said to be as common as or even more common than PTSD among combat veterans (25, 26). For instance, about 20% of Iraq and Afghanistan veterans tested positive for PTSD or depression (27). In the same line of argument, one can state that serving in the army as a conscripted soldier can be regarded as a very stressful experience for young male population, which can affect their mental health. The present study was an attempt to examine the effect of the length of this experience on individuals' suffering from mental disorders. In this regard, it was observed that soldiers who had symptoms of psychological disorders were significantly different from the healthy ones in terms of their length of military service. The mentally unhealthy individuals were in service much longer than other soldiers who showed no symptoms of psychological disorders. About 11 percent of the screened participants were observed to have symptoms of psychological disorders with depression being the most common problem. This could be due to the stressful situations individuals face during their service, which can negatively affect their quality of life. Being far from their family (10-13, 28) and not being able to cope with other soldiers or the commander (16) could be some of the reasons why soldiers show symptoms of psychological disorders as the length of their military service increases. As it is stated in the report released by Iranian Parliament (Majlis) Research Center (29), the authorities need to be warned about the consequences of observing such symptoms among soldiers. Soldiers con-

stitute a large proportion of the society's male population; thus, they are representative of the whole community, and their general and mental health can directly affect the society. The authorities need to be cautious about the existing threat depression in soldiers may pose. Depression can be regarded as the first stage before ending up in committing suicide. The high number of suicides committed among soldiers in all countries including Iran can be evidence to support the need to be concerned about soldiers' mental health. For instance, committing suicide is one of the major causes of death in US military (30, 31) and it had a sharp increase from 10.3 to 11.3 per 100,000 persons in 2005 to 16.3 per 100,000 persons in 2008 and has been 18 per 100,000 since 2009 (32). Therefore, in order to control for such a danger, authorities need to devise strategies and make decisions to improve soldiers' mental health and prevent soldiers from committing suicide. An interesting observation was made regarding the subscale of social dysfunction. It was observed that individuals serving longer in the army suffered from social dysfunction. In other words, they were dissatisfied with the social role they played and the activities in which they were involved in the society. As the length of service increases, the detachment from the family and society becomes more severe. These individuals will find it very difficult to go back to the society and integrate with others after they finish their military service (33).

The results of the present study imply that in order to have healthier individuals in the military bases and the society as well, the authorities need to take action. Different options are on the table. Either it must be decided to decrease the length of military service or take measures to nullify the negative effects of serving in the army for a long period of time. They can improve soldiers' mental health by devoting more time to exercising and doing sports in soldiers' daily schedule, incorporating more entertainment into their life, and having counseling sessions as an integral and vital part of the program to improve their quality of life. Having soldiers serve in their own hometown or a city very close to them is another solution helping prevent or decrease the symptoms of depression and social dysfunction by letting them be with their family and part of the society they used to be more involved in.

This study faced a number of limitations. Though no relationship was observed between age and psychological disorders in this study ($P = 0.26$), it is worth delving more deeply into this relationship. The mean age of the soldiers in this study was 19.37 ± 2.26 , which shows that the majority of the participants were very young and with an educational level of not higher than diploma. Soldiers' age may range from 18 to 35 or even higher. Different age groups may show different symptoms of psychological disorders due to their different life perspectives and way of thinking. Their educational level is a second factor needed to be explored more. As one's educational level increases, they find a better position and a more important role in the society. Consequently, being detached from the society into which he had already been thoroughly integrated becomes much more difficult. As a result, they might be more vulnerable to psychological disorders.

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