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The role of burnout and depression in self-destructive behaviour of the Islamic Republic of Iran Army personnel

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Summary:

Aim. The study aimed to investigate the role of job burnout and depression in self-destructive behaviour among the Islamic Republic of Iran Army personnel.
Method. For the purpose of this study, a conceptual structural model, Maslach Burnout Inventory (MBI), was designed and examined. Participants were 215 active duty personnel who completed a series of questionnaires to assess their mental health, level of burnout and propensity for depression.
Results. The measurement model revealed that all indicators except self-efficacy had significant factor weight on their latent variable; therefore, the model was revised by omitting it. The modified measurement model showed good fitness according to five indices. The structural model results showed that both burnout (β=0.24) and depression (β=0.56) have a direct effect on self-destructive behaviour; burnout influenced depression indirectly (β=0.56) and it has an indirect (β=0.35) and a total effect (β=0.59) on self-destructive behaviour. Finally, the fitness indices of the structural model indicated relatively good fitness.
Conclusions. Burnout and depression directly increase the tendency to self-destruction among military personnel. Our findings revealed that job burnout influences self-destruction by intensifying depression.

depression / burnout / suicide / self-harm

About 4% of the general population have a history of self-harm [1] 10 to 18% experience suicidal thoughts and 3 to 5% die by suicide [2]. Suicidal ideation is an important risk factor to a person's health and life, and an antecedent of suicide attempt [3]; the probability of suicide attempt among people with suicidal ideation is 6 times greater than in people without [4]. Although there is little information on the prevalence of suicide in Iran, the rate of suicide in this country is lower than in many other countries, especially in the West; however, it is higher compared with the countries in the Middle East [5].

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In some jobs, workers are more at risk of suicide than in others [6]. Previous studies have shown that the rate of suicide among military personnel has increased in recent decades [7]. It is the second cause of death in the United States Army [8], and prevalence of suicide among the military personnel has been estimated at 9 in 100 000 [9]. Self-harm behaviour is prevalent among military personnel – Klonsky et al. [10] reported a rate of 4% for the prevalence of self-harm among military freshmen. Although no precise statistics on the rate of suicide and self-harm among Iranian military personnel are available, Anisi et al. [11] reported that the prevalence of suicide attempts among Iranian soldiers is high. Fathi Ashtiani et al. [12] pointed out that suicide attempts among soldiers occur in the first 12 months of service, while the highest rate of

suicide among military personnel is observed between the 11th and the 15th year of service.

Suicidal and self-harm behaviour have different causes including psychiatric disorders [13, 14] and job characteristics [15]. Nock et al. [14] reported that psychiatric disorders play a significant role in suicide attempts among the general population, and depression is one of the strongest predictors of suicide in high-income countries. Suicide and self-harm are associated with depression [10, 13, 16, 17]. In general, depression is the most important risk factor for suicide [18, 19] and self-harm [20]. The important point is that depression is a common disorder among military personnel [21]. Several investigations in particular have focused on the role of psychological disorders in self-harm, and revealed that self-harm is among the factors involved in psychological conditions such as depression [22, 23]; however, it must be noted that most of these studies involved non-militants.

In spite of reports suggesting high levels of stress and job burnout in military environments [24-26], as well as high prevalence of suicide attempts and self-harm among military personnel, the role of job-related factors (such as burnout) in suicide and self-harm has not been investigated. Job-related factors may directly influence such behaviour, and may also indirectly increase the tendency to self-harm behaviour by worsening depression. Some studies suggest that job-related factors contribute to depression, for instance Finnegan et al. [27] showed that job problems are antecedents of depression among UK army personnel. Pflanz & Ogle [26] and Hagan & Kay [28] indicated that job-related factors (such as job satisfaction) are associated with depression among military personnel.

To sum up, the direct role of depression in the suicide and self-harm behaviour of army personnel has been investigated, but in some cases the findings are contradictory. The previous studies confirm the direct role of job-related factors in the development of depression; however, these factors can also indirectly lead to depression. Hence, the aim of the present study is to investigate the direct effect of job factors (burnout) and depression on self-destructive behaviour (i.e. suicide and self-harm) among military personnel. The indirect effect of job factors on such behaviours is also investigated.

METHOD

Participants

The study participants were army personnel working at the army barracks during 2014. The study sample was 215 active duty personnel (men) of the Islamic Republic of Iran Army. The mean age of participants was 31.07 years (SD=4.71 years); 176 were married and 39 were single.

Measures

Suicide Behavior Questionnaire-Revised (SBQ-R)

SBQ is a 4-item self-report questionnaire, each item tapping different dimensions of suicide, including: lifetime suicide ideations and/or suicide attempts; frequency of suicidal ideations over the past 12 months; threat of suicide attempt; and likelihood of suicide behaviour in the future. The scale's psychometric properties have been investigated in adults in the general population and in those with psychiatric disorders, and the results showed good internal consistency and reliability [29, 30]. The validity of this questionnaire was confirmed by differentiating individuals at risk of suicide and those without suicidal thoughts. The sensitivity and specificity of the questionnaire were also reported to be satisfactory [29].

Self-Harm Inventory (SHI)

The SHI is a self-report questionnaire that comprises 22 items and explores the history of self-harm. It has been translated into different languages and its psychometric properties have been validated [31]. The items are divided into eating disorder items, high-lethal items, items relating to medical issues, and some individual items concerning cutting, burning, scratching, etc. The participants are asked to answer "yes" or "no" and the total score is obtained by summing up the "yes" responses. Studies revealed that SHI demonstrates good differential and construct validity [32]. In the present study, the inventory was first translated into Persian by two psychologists (Ph.D), and then back-translated

into English and modified by a clinical psychologist (Ph.D). The Cronbach's alpha coefficient obtained for the entire inventory in the present research was 0.76.

Beck Depression Inventory-Second Edition (BDI-II-Persian)

The BDI-II is commonly used by clinicians all over the world, and has been developed to assess the feedback and symptoms of depressed patients. It contains 21 items which measure severity of depressive symptoms along a continuum, from 0 (absent or mild) to 3 (severe), and the total score is computed by summing up all items [33]. This inventory generally focuses on depression symptoms, but specifically emphasises cognitive dimensions. It has a two-factor structure: the physical-emotional factor and the cognitive factor [34].

Maslach Burnout Inventory (MBI)

This inventory was developed by Maslach and Jackson to assess burnout, and contains 22 statements that assess the following dimensions of burnout: emotional exhaustion, depersonalisation and lack of self-actualisation. It is scored using a Likert scale, with higher scores showing a higher level of burnout. In the preliminary investigations, reliability of emotional exhaustion, depersonalisation and self-actualisation assessed using Cronbach's alpha was 0.90, 0.79 and 0.71, respectively [35]. In Iran, Mo'meni reported Cronbach's alpha coefficients of 0.88, 0.76 and 0.79 for the three dimensions, and the Cronbach's alpha coefficient for the total score was 0.83 [35].

Procedures

In order to collect data, samples were taken from the infantry training centres by the arrangements made by the Education Deputy of AJA University of Medical Sciences. To this end, the psychologists operating in units attended a brief session aimed at explaining how to examine the questionnaires. Next, the psychologists distributed the questionnaires among the participants. After having been provided with adequate explanation, the participants were given a consent form laying out the risks and probable benefits of the study associated with the participants. When their consent was obtained, the participants were asked to voluntarily complete the questionnaires. All questionnaires were completed in the psychological clinic's waiting room. Afterward, the questionnaires were gathered and data analysis was performed using the SPSS and AMOS software.

RESULTS

Before assessing the conceptual structural model, a measurement model was examined using confirmatory factor analysis in order to determine the indicators' capabilities for measuring the latent variables. The resulting measurement model included the following latent variables: burnout, depression and self-destruction. The first variable had three indicators (emotional exhaustion, depersonalisation, self-efficacy), the second had two (cognitive and physical-emotional), and the third variable had two indicators (suicidal behaviour and self-harm).

The fitness indices of the measurement model and factor weight revealed that all indicators except self-efficacy had significant factor weight on their latent variable. Therefore, the self-efficacy indicator was omitted and confirmatory factor analysis was repeated again. The factor weights of burnout were 0.92 (emotional exhaustion) and 0.84 (depersonalisation); the factor weights of depression were 0.92 (cognitive indicator) and 0.82 (physical-emotional indicator); and finally, the factor weights of self-destruction were 0.82 (suicide) and 0.76 (self-harm). Table 1 – *next page* – presents the fitness indices for the modified measurement model.

As shown in Table 1, the Chi-square normed index (CMIN/df) was 3.81, goodness of fit index (GFI) was 0.96, adjusted goodness of fit index (AGFI) was 0.88, comparative fit index (CFI) was 0.96, incremental fit index (IFI) was 0.97, and the root mean squared error of approximation (RMSEA) was about 0.10. All of these indices indicate the relatively good fitness of the measurement model and suggest that the latent variables have satisfactory fitness and validity.

After examining the measurement model, the conceptual structural model was examined using structural equation modelling (SEM). The conceptual structural model included the following

Table 1. Measurement model fitness indices

Model	χ^2	CMIN/df	GFI	AGFI	CFI	IFI	RMSEA
Modified measurement model	22.90	3.81	0.96	0.88	0.97	0.97	0.11

three variables: burnout, depression and self-destruction. Our objective was to study the direct effect of burnout on self-destructive behaviour, the direct effect of depression on self-destructive behaviour, and the indirect effect of burnout on self-destructive behaviour through depression. Figure 1 shows the revised structural model as well as the effects of the three variables.

As shown in Figure 1, both burnout (β=0.24, P>0.01) and depression (β=0.56, P>0.01) have a direct effect on self-destructive behaviour. In addition, burnout influences depression indirectly (β=0.56, P>0.01). Finally, the findings indicated that burnout has indirect (β=0.35) and total (β=0.59) effect on self-destructive behaviour. Table 2 shows the direct, indirect and total effect of exogenous variables on the endogenous variables of the model.

The fitness indices of the structural model are shown in Table 3 . They show that the structural model has a relatively good fitness.

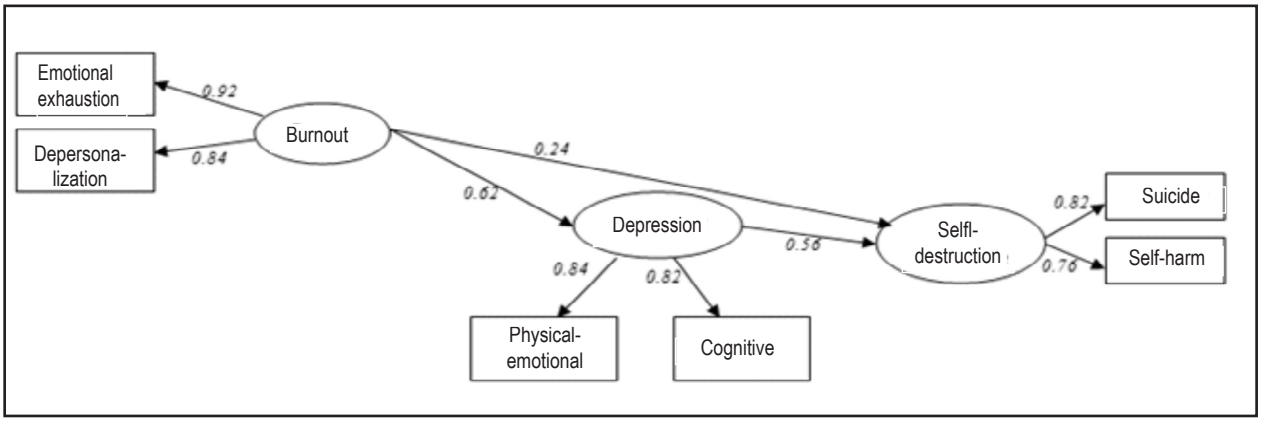

Figure 1. The structural model of the effects of burnout and depression on self-destruction

Table 2. Standard coefficient of exogenous variables on endogenous variables of the model

Effect	Path	Effect coefficient
Direct	Job on depression	0.62
	Job on self-destruction	0.24
	Depression on self-destruction	0.56
Indirect	Job on self-destruction	0.35
Overall	Job on self-destruction	0.59

Table 3. Fitness indices of the structural model

Model	2χ	CMIN/df	GFI	AGFI	CFI	IFI	RMSEA
Structural model	22.91	3.82	0.96	0.88	0.97	0.97	0.11

DISCUSSION

The research findings showed that burnout and depression directly increase the tendency to self-destruction among military personnel. Moreover, burnout influences self-destruction by intensifying depression. These findings are consistent with the results of previous studies in which it was found that psychological disorders such as depression influence self-destructive behaviours (such as suicide and self-harm) in militants [7-10]. Klonsky et al. [10] showed that army service personnel displaying self-destructive behaviour obtain high scores in depression scales. Hyman et al. [7] also suggested that psychiatric disorders (such as depression) are associated with attempted suicide among militants. However, similar findings were also reported among non-militant populations, where psychiatric disorders (including depression) were reported to be among the most important factors influencing suicide and self-harm [22, 36-39].

As Warner et al. [21] pointed out, one possible cause of the experience of negative or depressive emotions is that military environment abounds in stressors such as potential of death or injury, death of others, detachment from families. From a cognitive point of view, it can be interpreted that military personnel are pessimistic about their circumstances and that they generalise the current unpleasant circumstances to the future and conclude that their problems are everlasting, constant and unsolvable. However, as mentioned earlier, depression can develop as a result of an interaction between the environmental pressures and problems (including workplace, family and social problems) and the individual's defective cognitive structures. Therefore, by manipulating these factors, it is possible to enhance psychological conditions and contribute to the prevention of self-harm and suicide.

Regarding the effect of burnout on self-destruction, the findings of this study are consistent with the findings of Schneider et al. [40] and Law et al. [41]. These researchers indicated that workplace problems including stress, psychological conditions, responsibility, etc., lead to an increase in suicide tendencies among employees; moreover, the more critical and problematic the working conditions are, the greater the potential for self-harming behaviour. The study samples in these two investigations included individuals with a history of attempted suicide as well as a control group. The researchers did not refer to the jobs of the participants, who were selected from various professions. However, since intense mental stress is imposed on militants owing to the nature of military jobs, similar results can be expected.

In order to explain our findings from an ecological perspective on self-harming behaviour, it can be argued that stress leads to the inability to cope with job conditions and demands, and interrupts the person's interactions with colleagues, job demands and their efficacy in solving job problems [42]. In such circumstances, the person loses their decision-making ability and only relies on emotional coping strategies which include self-harm. In other words, individuals who self-harm mostly have adaptive problems and cannot adapt to the environment.

Although no study has been performed on the indirect role of job variables in depression-induced self-harming behaviour, the study by Finnegan et al. [27] indicated that various factors (such as job factors) led to an increase in depression among members of the British Army. Since other studies revealed that depression leads to an increase in the tendency for self-harming behaviour and suicide [7, 10, 22, 36, 37, 39, 43], it can be concluded that depression has a mediating role in the development of tendency for suicide among militants, which is partly caused by job-related factors.

To explain this finding, it can be said that environmental-social factors contribute to the individual's vulnerability to psychopathology, and the interaction between the individual and the environment plays a role in the development of psychopathology. This suggests that in individuals who are vulnerable to depression and living in stressful environments the stress may lead to depression, which in turn may result in self-destructive behaviours. Then it is possible to identify people at risk of job problems and teach them ways of coping (such as stress reduction) in order to prevent depression and self-destructive behaviours.

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