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Resilience, Emotions, and Character Strengths as Predictors of Job Stress in Military Personnel

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Abstract

Background: Job stress, which undermines productivity and physical and mental health, has been reported to be high among military personnel.
Objectives: The present study aimed to explore the role of character strengths, emotions, and resilience in predicting job stress in a sample of Iranian military personnel.
Methods: This cross-sectional study recruited a total number of 146 military personnel via convenience sampling and administered the Health and Safety Executive Stress Questionnaire, Conner-Davidson Resilience Scale, Values in Action Inventory of Strengths, and Positive and Negative Affect Schedule. The correlation analysis and stepwise linear regression were performed using SPSS22.
Results: Job stress was negatively associated with resilience, positive emotions, and character strengths and positively associated with negative emotions ($P < 0.001$). Regression analysis revealed that three variables, including resilience, courage, and negative emotions could predict 57% of the variance in job stress (Adj. $R^2 = 0.57$, $P < 0.001$).
Conclusions: Higher resilience and courage are associated with lower job stress. Also, negative emotions such as anger, guilt, and anxiety would contribute to higher job stress. Providing training courses to develop and boost resilience and courage and manage negative emotions can offset the negative effects of job stress on military personnel. Also, considering these factors as recruitment criteria would lead to the enlistment of cadets who may be more resilient to stress.

Keywords: Character Strengths and Virtues, Emotions, Military Personnel, Resilience, Job Stress

1. Background

Major corporations and sensitive positions, such as the military, often require their staff to have or show superior physical and psychological qualities. For this reason, work-related stress is considered a major factor threatening mental health (1). In the military, in particular, personnel are bound by strict discipline and absolute obedience and may be exposed to greater extents of stress in their work environment compared to workers in other occupations (2). Military personnel has been reported to experience high levels of job stress compared to people in occupations, such as nursing (3).

Job/work stress refers to anxiety, tension, or stress related to one's job (4). Indeed, a person is said to have job stress when he is beset by feelings of toughness, tension, anxiety, frustration, distress, and worry regarding his job (5). Owing to an abundance of unexpected and potential hazards, which contribute greatly to job stress, military personnel tend to experience higher levels of job stress compared with other people (6). Also, because of the nature of the military career, which necessitates keeping a perpetual state of physical and mental readiness, a military setting is conducive to mental stress. Continuous stress would have significant implications for the family, as well as the workplace environment, including showing disciplinary, authoritarian, and harsh behaviors at home (7).

Several studies have shown that military personnel has high levels of job stress. Azad Marzabadi and Niknafs studied 595 military personnel from various departments in Iran and reported a high level of job stress in the study sample compared to the regular population (7). Pflanz and Ogle, in their study of 809 military personnel, found that 27% of them suffered from high job stress (8). Another study with 87 active-duty military personnel reported the presence of work-related stress in more than 60% of the

personnel (9). Other studies have also reported high levels of job stress in military personnel (10, 11). Given the high levels of job stress in military personnel, identifying factors and personality traits contributing to this issue can have significant implications for the management of job stress among military personnel.

Resilience has been the subject of extensive research in military settings. Various definitions have been proposed for resilience, including coping with stress and adversities and tragic events that contribute to the development and enrichment of protective factors (12). Resilience has been defined as a capacity stemming from self-esteem, emotional stability, or personality characteristics that help a person overcome difficulties, survive stress, and stand up to disadvantages (13). Bonanno defines resilience as the individuals' ability to maintain psychological stability in the face of potentially disruptive events such as the death of a close relation, violence, or life-threatening situations (14). Various studies on military personnel have shown that psychological resilience significantly contributes to recovery from depression (15, 16), posttraumatic stress disorder (15, 17, 18), impaired mental health (19), and alcohol misuse (20).

The association of resilience with job stress in military personnel has been examined in several studies. In a study of 2,063 employees in demanding professions, including the military, Shatté et al. found resilience as an important predicting factor for job stress (21). Rees et al. reported a strong correlation between resilience and workplace stress (22). On the other hand, recent research suggests that positive psychological variables such as character strengths and positive or negative emotions may also predict job stress in military personnel.

Positive psychology was introduced by Seligman and Csikszentmihalyi in 2000. It was a response to the illness-centric approach that had dominated psychology since World War II (23). Positive psychology holds that the mere treatment of disease symptoms is not sufficient and that the lives of people should be guided in a positive direction to thrive (24, 25). The other objective of this approach is to try to ameliorate the problems and disorders by concentrating on positive aspects of life, individuals' capabilities, and positive emotions rather than focusing on the negatives of the individual's life and personality (26). Character strengths and virtues and positive emotions are two positive psychology variables that have been investigated for their potential role in the prevention of psychological problems. In their book "Character Strengths and Virtues", Peterson and Seligman attempt to classify the humanistic ideals of virtues. Their goal is to develop a positive psychology version of the Diagnostic and Statistical Manual of Mental Disorders by providing a classification system for human abilities. They finally came up with six virtues known to be common to all religions and creeds: wisdom, courage, humanity, justice, temperance, and transcendence (27). Studies have also been performed on the predictive role of positive emotions (26, 28). Some studies have pointed to the association of resilience with character strengths (29) and emotions (30). Since resilience is considered a predictor of job stress, it is possible that character strengths and emotions may also predict job stress.

The findings from different studies show that some of the positive psychology variables such as character strengths and positive emotions can influence various aspects of the individuals' functioning. However, since positive psychology is a relatively novel approach, the number of studies is limited. To the best of our knowledge, no study has taken into account all of the aforementioned variables to relate the positive psychology approach to the findings of the other fields of psychology.

2. Objectives

The present study aimed to examine character strengths, emotions, and resilience as predictors of job stress in military personnel in Iran.

3. Methods

3.1. Sample and Procedure

In the present cross-sectional study conducted in 2017 - 18, 146 military personnel were recruited through convenience sampling. The inclusion criteria were (a) being a permanent employee of the Iranian military, (b) holding a sergeant rank or higher, and (c) being 20 to 65-years-old. The exclusion criterion was having a mental illness, according to self-declaration. The procedure of data collection was as follows: First, questionnaires were distributed to the military personnel who were willing to fill in them. For this purpose, various military centers were visited in Tehran. In the second phase, two weeks later, researchers again visited the same military centers and received complete questionnaires. Finally, the collected questionnaires were coded, and the data were entered into statistical software.

3.2. Research Tools

3.2.1. Health and Safety Executive Stress Questionnaire (HSE)

The questionnaire was developed by the UK Health and Safety Executive in the late 1990s to assess workplace stress in workers and employees in the UK (31). It has 35 items

making up seven components, including demand, role, relationship, support from management, support from colleagues, control, and change (32). The reliability and validity of the HSE questionnaire have been assessed in several studies. MacKay et al. reported Cronbach's alpha for the questionnaire and its components to range from 0.63 to 0.83 (33). Kerr et al. reported a Cronbach's alpha coefficient of 0.83 and good construct validity (34). Marzabadi and Gholami Fesharaki (32) found a negative correlation between HSE and the General Health Questionnaire (r = -0.48). They reported the validity and split-half reliability of the questionnaire to be 0.78 and 0.65, respectively. They also demonstrated strong correlations among the factors extracted from the items of the HSE (role: 0.92; relationship: 0.73; support from management: 0.75; support from colleagues: 0.63; control: 0.87; demand: 0.85; and change: 0.22).

3.2.2. Connor-Davidson Resilience Scale (CD-RIS)

The scale was developed by Connor and Davidson as a means of assessing resilience (35). It contains 25 items rated on a 5-point Likert scale from 0 (not true at all) to 4 (true at all times). The total score ranges from 0 to 100, with higher scores corresponding to higher resilience. The psychometric properties of the scale were evaluated in various populations, including a community sample, primary care outpatients, general psychiatric outpatients, a clinical trial of generalized anxiety disorder, and two clinical trials of PTSD. The developers of the instrument concluded that the scale could discriminate resilient individuals in both clinical and non-clinical populations (35). The Persian version of this questionnaire has a Cronbach's alpha of 0.73 to 0.91 (36, 37).

3.2.3. Values in Action Inventory of Strengths (VIA-IS)

This inventory was developed by Seligman and Peterson in 2003 as a means of evaluating 24 character strengths composing of six virtues. The short form of the questionnaire contains 48 items, and both the internal consistency and test-retest reliability of the questionnaire were > 0.7 (28). In a study in Iran, Cronbach's alpha of 0.98 was obtained (38).

3.2.4. Positive and Negative Affect Schedule (PANAS)

This is a self-report questionnaire widely used to measure positive and negative emotions. It was developed by Watson and colleagues in 1988 and is composed of two 10-item scales for assessing both positive and negative affect. They reported alpha coefficients for positive and negative affect to be 0.88 and 0.87, respectively. Also, the questionnaire has eight-week retest reliability of 0.68 for positive affect and 0.71 for negative affect (39). Khodarahimi reported a high internal consistency of 0.90 in an Iranian sample (40).

Also, a questionnaire was used to collect the demographic characteristics of the participants, including age, gender, marital status, and years of service.

3.3. Date Analysis

Data were analyzed using SPSS22. The data are presented as mean ± standard deviation or frequencies, as appropriate. Pearson correlation coefficients were calculated to analyze the strength of associations between job stress and each of the variables. Stepwise linear regression was used to evaluate how well resilience, emotions, and character strengths predicted job stress in participants.

4. Results

A total of 146 military personnel participated in the study. The mean age and years of service were 28.07 ± 8.48 and 11.92 ± 7.1 years, respectively. The sample was composed of 142 male (97%) and 4 (3%) female personnel. Singles made up about 64% (n = 94) of the sample. Of the married participants, three (2%) had no children, 24 (17%) had one child, 18 (12%) had two children, and seven (5%) had three children. Table 1 presents the results of the correlation analyses.

Job stress was negatively correlated with resilience, positive emotions, and all the components of character strengths, and the correlations were significant ($P < 0.01$). However, the association between job stress and negative emotions was significantly positive ($P < 0.01$).

Table 2 shows the results of stepwise regression analysis. In the first step of regression analysis, resilience was entered in the regression equation, and it could predict 50% of the variance in job stress (Adj. $R^2 = 0.50$, $P < 0.001$). In the second step, courage was entered in the equation and, together with resilience, predicted 55% of the variance in job stress (Adj. $R^2 = 0.55$, $P < 0.001$). Finally, the negative emotions variable was entered in the equation, and the three variables could predict 57% of the variance in job stress (Adj. $R^2 = 0.57$, $P < 0.001$).

5. Discussion

Our results showed that resilience, courage (a character virtue), and negative emotions could predict job stress. Therefore, job stress decreased as resilience and courage increased and negative emotions decreased, and vice versa.

Our findings are consistent with the findings of previous studies on the association of job stress with resilience

Table 1. Correlation Between Job Stress and Resilience, Emotions, and Character Strengths

Variables	Subscales	M	SD	1	2	3	4	5	6	7	8	9	10
Job stress	Job stress	96.85	15.53	1									
Resilience	Resilience	62.45	14.02	-0.66[a]	1								
Emotions	Positive emotions	34.97	6.75	-0.41[a]	0/35[a]	1							
	Negative emotions	19.38	6.11	0.42[a]	-0.32[a]	-0.41[a]	1						
Character strengths	Wisdom	25.77	4.42	-0.47[a]	0.51[a]	0.07	-0.01	1					
	Courage	25.67	4.17	-0.58[a]	0.59[a]	0.128	-0.07	0.62[a]	1				
	Humanity	25.40	4.45	-0.49[a]	0.57[a]	0.26[a]	-0.23[a]	0.54[a]	0.62[a]	1			
	Justice	25.76	4.16	-0.47[a]	0.59[a]	0.13	-0.10	0.56[a]	0.69[a]	0.64[a]	1		
	Temperance	25.89	3.65	-0.44[a]	0.48[a]	0.16	-0.09	0.54[a]	0.56[a]	0.47[a]	0.59[a]	1	
	Transcendence	26.05	5.45	-0.43[a]	0.32[a]	0.08	-0.09	0.43[a]	0.28[a]	0.34[a]	0.40[a]	0.26[a]	1

[a] $P < 0.01$

Table 2. Stepwise Linear Regression Analysis to Predict Job Stress Based on Resilience, Emotions, and Character Strengths

Dependent	Step	Predictors	R	R^2	Adj. R^2	F	P	B	β	T	P
Job stress	1	Resilience	0.71	0.50	0.50	88.29	< 0.001	-0.83	-0.71	-9.39	< 0.001
	2	Resilience	0.74	0.56	0.55	53.69	< 0.001	-0.63	-0.54	-5.92	< 0.001
		Courage						-1.16	-0.28	-3.14	0.002
	3	Resilience	0.77	0.59	0.57	40.21	< 0.001	-0.49	-0.42	-4.26	< 0.001
		Courage						-1.29	-0.31	-3.55	0.002
		Negative emotions						0.53	0.20	2.52	0.013

(21, 22). Also, various studies have documented the significant protective effect of resilience against depression (15, 16), PTSD (15, 17, 18), impaired mental health (19), and alcohol misuse (20) in military personnel. Resilience is a capacity that helps the individual to cope better with stress and difficulties. People with high psychological resilience possess greater abilities to recover from stressful situations (41) and can positively adapt to those situations (42).

Although no study has looked at the association of job stress with emotions and character strengths, the relationship between resilience and character strengths (29) and emotions (30) has been demonstrated, and resilience is related to job stress. According to positive psychology, developing and boosting positive emotions, as well as dealing with negative emotions, can shield us against more severe psychological problems. This approach, therefore, sees emotions as crucial factors affecting mental health (26).

Our finding that the virtue of courage is a predictor of job stress implies that having the courage to overcome and not give in to barriers would help individuals achieve their goals. Courage is defined as believing in what one does in facing difficulties. A person with courage performs confidently and is not scared of objection or criticism (43). Such a quality could be useful in a stressful military setting. On the other hand, courage is a highly esteemed virtue in the military, and those who display courage will earn the respect of their compatriots in the long run.

Research indicates that character strengths and virtues are considered key characteristics in the militaries of different countries, and their significance to the organization of the military is increasingly being recognized. Among them, bravery has received more attention. A study, for example, compared two samples of military cadets (from the US and Norway) and a sample of US civilians in terms of character strengths and found that bravery was among the greatest strengths present in the military cadets (44).

5.1. Conclusion

On the whole, possessing greater resilience and courage seems to positively affect job stress in military personnel. Also, negative emotions such as anger, guilt, and anxiety are associated with greater job stress. An important implication of the present study is that resilience and courage can be enhanced, and negative emotions may be managed through training courses. These courses

can indirectly affect job stress. Also, considering these strengths in enlisting recruits will make it possible to select individuals with higher resilience and courage and less negative emotions.

However, owing to some limitations in the study, caution should be exerted in the generalization of the findings. Among the limitations of the study are not distinguishing among different kinds of work stress in different sections of the military and providing inaccurate responses because of the relatively large number of questions. Moreover, the major limitation of the study was related to the sampling method. Convenience sampling leads to bias in findings.

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Footnotes

Authors' Contribution: Arsia Taghva and Seyed Teymur Seyedi Asl designed the Study. Mohammad Mehdi Elikaee and Seyed Teymur Seyedi Asl Analyzed and interpreted the data. Arsia Taghva Drafted the manuscript. Seyed Teymur Seyedi Asl and Amir Mohsen Rahnejat Critically revised the manuscript for important intellectual content. All authors read and approved the final manuscript.

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