

Analysis of psychological and social factors of occupational stress in military personnel

Raximov Umidjon Muratovich

Bukhara State University

uraximov724@gmail.com



Article History

Received on 19 April 2025

1st Revision on 4 May 2025

Accepted on 6 May 2025

Abstract

Purpose: The study aims to examine the psychological and pedagogical foundations essential for developing innovative thinking in future computer science (informatics) teachers. It focuses on identifying key competencies such as creativity, cognitive flexibility, critical thinking, and adaptive problem-solving in the context of digital transformation in education.

Research methodology: A mixed-methods approach was applied, combining qualitative and quantitative research. The study involved surveys, psychometric tests (e.g., Torrance Tests of Creative Thinking), interviews, focus groups, and classroom observations with a sample of 200 participants, including pre-service informatics teachers and faculty members. Data were analyzed using thematic analysis for qualitative inputs and statistical methods for quantitative data, ensuring triangulation for validity.

Results: The findings indicate that innovative thinking in future informatics teachers is significantly influenced by a combination of psychological traits (such as self-regulation and intellectual curiosity), supportive pedagogical environments, and exposure to digital technologies. Effective development of innovative competencies requires integrated strategies involving experiential learning, reflective practices, and emotional intelligence training. The study recommends curriculum reforms, mentorship programs, and the use of digital tools to foster a culture of sustained innovation in teacher education.

Keywords: *innovative thinking, future computer science teachers, creativity, cognitive flexibility, pedagogical environment*

How to Cite: Muratovich, R. U. (2025). Analysis of psychological and social factors of occupational stress in military personnel. *Psychohealth: Scientific Journal of Psychology and Mental Health*, 1(2), 65-71.

1. Introduction

Military service is a unique and highly stressful profession in which every service member faces various psychological and social pressures. Military personnel operate in conditions that require not only physical preparedness but also mental resilience. Occupational stress in the military is directly linked to service members' duties, personal lives, and roles in society, significantly impacting their psychological and social well-being. Psychological factors such as individual characteristics, attitudes toward challenging situations, exposure to high-risk environments, and difficulties in problem-solving can profoundly affect their mental health.

Additionally, social factors within the military environment, such as relationships with colleagues, family-related challenges, or weak social support systems, also contribute to the development of occupational stress. Analyzing these factors, developing stress management strategies, and providing psychological support to service members can help mitigate negative consequences.

This article is dedicated to analyzing the psychological and social factors of occupational stress in military personnel, examining its causes, consequences, and methods for reducing stress. This analysis is crucial in developing effective stress management strategies within military organizations.

2. Literature review

Several scientific studies have explored the psychological and social factors contributing to occupational stress in military personnel. These studies examine the origins of stress, its consequences, and various approaches to managing it. Below, key research findings on the psychological and social factors of occupational stress in military personnel are analyzed.

Military Stress and Psychological Factors: Several studies link military personnel's susceptibility to stress with psychological characteristics. For example, research conducted by Brewin et al. (2000) demonstrates that high levels of stress among military personnel are associated with individual psychological states, levels of composure, and anxiety. The researchers argue that increasing stress levels are connected to psychological changes in military personnel when resolving challenging situations. Emotional fluctuations play a crucial role when service members undertake new tasks or face high-risk situations.

Social Factors and Stress: The social environment significantly affects military personnel's stress levels. A study by Hoge et al. (2004) examines how family relationships and social support networks influence stress levels among military personnel. According to the study, strong family and social support networks enhance service members' ability to cope with stress. Conversely, a lack of such networks can intensify stress and deteriorate mental health.

Stress and Psychological Health: A comprehensive analysis of occupational stress's impact on mental health is presented in Friedman's (2014) study. The research highlights that long-term exposure to stress can manifest as post-traumatic stress disorder (PTSD), especially among military personnel. Managing stress becomes increasingly difficult during combat operations, special missions, or extreme conditions, leading to serious consequences for mental health.

Reducing Stress and Providing Psychological Assistance: Various studies discuss strategies for reducing stress and supporting military personnel. Bryan et al. (2009) demonstrate that psychological counseling and therapy effectively help military personnel manage stress. Their findings suggest that peer support, group training, and psychological counseling enhance service members' ability to cope with stress.

Social Consequences of Stress: The social consequences of stress among military personnel, including its effects on family relationships and societal roles, have been widely studied. A study by Litz et al. (2000) indicates that stress levels among military personnel can negatively impact family relationships and participation in society. High stress levels contribute to family conflicts, social isolation, and deteriorating mental well-being.

Discussion. Analyzing the psychological and social factors of occupational stress in military personnel is essential for understanding its sources and consequences. The literature review reveals the interconnection between psychological and social factors in military environments and their significant impact on service members. This understanding helps develop effective stress management strategies. The psychological characteristics of military personnel play a crucial role in determining their reaction to stress. Self-confidence, risk perception, and the ability to adapt to situations influence stress management capabilities. Brewin et al. (2000) suggest that psychological stress depends on individual differences and that psychological interventions can help service members cope with stress. This underscores the necessity of individual psychological counseling and training programs focused on stress management techniques. Strengthening military personnel's ability to resist stress, improve their psychological well-being, and reduce negative attitudes toward stressful situations is essential.

Social support networks, including family and community ties, serve as a protective mechanism against stress. Research by Hoge et al. (2004) highlights the role of family support in stress reduction. Numerous studies confirm that military personnel who receive strong family and community support are better equipped to handle stress. However, a lack of social support increases stress levels. Therefore, military organizations must prioritize strengthening social networks and fostering relationships between service members and their families.

The long-term negative effects of stress on military personnel include PTSD, depression, and other mental disorders. Research by Friedman (2014) emphasizes the detrimental impact of prolonged stress on mental health. If stress remains unmanaged, it can lead to significant psychological and physical health deterioration. Consequently, providing psychological support and implementing stress management strategies is essential. Military organizations must establish comprehensive psychological assistance programs and regularly offer counseling services to their personnel.

Developing effective strategies for managing occupational stress is crucial for military organizations. Research highlights the importance of psychological counseling, training programs, and stress management techniques. A study by Bryan et al. (2009) suggests that stress management strategies, including peer support, training sessions, and counseling services, significantly reduce stress levels and improve military personnel's well-being. Additionally, strengthening social networks, enhancing family support systems, and fostering community engagement are necessary for reducing stress levels. Analyzing occupational stress in military personnel from psychological and social perspectives provides critical insights into its causes, consequences, and management strategies. The findings emphasize the importance of mental resilience, social support networks, and structured stress management programs within military environments. To improve stress management in military personnel, the following recommendations are proposed:

Enhancing Psychological Resilience: Military organizations should provide psychological counseling, mental resilience training, and stress management workshops to help service members cope with challenging situations.

Strengthening Social Support Systems: Establishing family support programs and community engagement initiatives can help reduce stress levels among military personnel. **Providing Continuous Psychological Assistance:** Military personnel should have access to psychological counseling services to address stress-related challenges. **Implementing Tailored Training Programs:** Training programs on stress management and emotional regulation techniques should be integrated into military training curricula.

3. Methodology

This research is grounded in modern theories of stress, particularly Hans Selye's General Adaptation Syndrome, the Stress and Coping Theory developed by Lazarus and Folkman, as well as the scientific works of A. Leontyev, D. A. Leontyev, and V.A. Bodrov concerning psychological conditions, occupational stress, and socio-psychological adaptation.

A comprehensive approach was employed in the study, in which psychological, social, and organizational factors were analyzed in interrelation. This methodology made it possible to deeply examine the mechanisms of stress formation in military personnel.

3.1 Research Methods.

The following empirical methods were used in the study:

1. Survey method – Targeted questionnaires were used to collect data on the stress levels of military personnel, its causes, and their attitudes towards stress.
2. Psychological testing:
 - a. Holmes-Rahe Life Stress Inventory – used to assess the intensity of stressful life events experienced in the past year.
 - b. Lazarus and Folkman's COPE Inventory – used to analyze individuals' coping strategies and their responses to stress.

- c. Spielberger's State-Trait Anxiety Inventory (STAI) – used to measure the levels of state and trait anxiety among service members.
3. Semi-structured interviews – allowed for gathering subjective insights into the psychological pressures and social interactions in the military environment.
4. Observation method – employed to directly analyze organizational and social situations potentially causing stress during active service.

The study involved 100 military personnel from the Armed Forces of Uzbekistan, aged between 20 and 45 years, with service lengths ranging from 1 to 20 years. Of them, 70 were enlisted soldiers, and 30 were officers.

Empirical data were processed using **descriptive statistics** (mean values, variances) and **correlation analysis** to identify relationships between stress levels and contributing factors.

All psychological instruments used in the research conform to international standards and were previously adapted for use with Uzbek-speaking populations. Data collection was conducted anonymously to ensure the honesty and reliability of responses.

4. Results and discussions

Analysis of stress levels among military personnel.

According to the Holmes-Rahe scale results, more than 65% of participants experienced **moderate to high levels** of stress. The most common sources of stress included:

1. Conflicts with close friends;
2. Change of duty station;
3. Organizational pressure and strict disciplinary demands;
4. Separation from family and social isolation.

Coping strategies

Based on the results of the COPE Inventory by Lazarus and Folkman, the following coping strategies were observed:

1. **Problem-focused coping**: 32% of the personnel attempted to actively resolve stressful situations.
2. **Emotional withdrawal or denial**: 41% tended to ignore or avoid stressful conditions.
3. **Seeking social support**: 18% reported turning to friends or colleagues for emotional assistance.
4. **Religious or spiritual reliance**: 9% used faith-based or personal spiritual practices as a coping mechanism.

These results indicate that a significant portion of military personnel rely on **ineffective or superficial strategies** in dealing with stress.

Anxiety levels.

According to Spielberger's inventory:

1. **High trait anxiety** was found in 43% of participants;
2. **High state anxiety** was found in 52% of participants.

These findings reflect that military personnel are under **persistent psychological pressure**, and the constant exposure to stressful service conditions can lead to **mental fatigue**.

Analysis of social factors.

Semi-structured interviews revealed the following social factors as **key contributors** to occupational stress:

1. Limited communication with family members;
2. Rigid hierarchy and communication barriers within the unit;
3. Uncertainty and risk associated with military duties;
4. Lack of sufficient psychological support systems.

More than **60%** of participants expressed a **need for psychological assistance** during their service. However, only about **10–12%** reported receiving **qualified psychological support**.

Fostering a Positive Organizational Climate: Creating an environment that promotes teamwork, mutual support, and open communication can significantly reduce stress levels.

This table presents the methods and approaches used in analyzing the psychological and social factors of occupational stress in military personnel.

Table 1

Research Stage	Methodological Approach	Factors Studied	Data Collection Methods	Analysis Methods
Defining Research Objectives and Tasks	Theoretical analysis and empirical research	Psychological and social factors of occupational stress in military personnel	Analysis of scientific literature	Qualitative analysis
Examining Psychological Factors of Stress	Experimental and psychological approach	Individual psychological characteristics (calmness, anxiety, reaction to risk)	Surveys, psychological tests	Statistical analysis (Chi-square test, correlation)
Analyzing Social Factors	Social psychological approach	Family and community support networks, workplace relationships	Interviews, focus groups	Content analysis, thematic analysis
Identifying Stress Management Strategies	Practical research and expert opinions	Stress management training, psychological assistance programs	Expert interviews, practical exercises	Comparison of results, trend identification
Studying Psychological and Physical Consequences of Stress	Longitudinal studies	PTSD, depression, anxiety, and other mental health issues	Psychological tests, clinical interviews	Longitudinal analysis, statistical regression
Summarizing Data and Drawing Conclusions	Qualitative and quantitative approach	Impact of stress on military personnel and coping strategies	Surveys, interview results	Analytical conclusions, recommendations development

Research Objectives and Tasks

1. Identify and analyze the psychological and social factors of occupational stress in military personnel.
2. Develop effective strategies for stress management.

Methodological Approach

The study employs a theoretical analysis and empirical research approach. Practical research is conducted based on experimental and social psychological methods to analyze psychological and social factors.

Factors Studied

Occupational stress factors, including psychological (individual characteristics, reaction to risk, calmness, anxiety) and social (family support, community support, isolation) aspects.

Data Collection Methods

Data is collected through surveys, psychological tests, interviews, focus groups, expert interviews, and practical exercises.

Analysis Methods

Data is processed using statistical analysis, content analysis, and thematic analysis. Qualitative and quantitative methods, including longitudinal analysis, regression analysis, and survey-based methods, are applied.

5. Conclusion

Research on the psychological and social factors of occupational stress in military personnel has helped to comprehensively understand various stress sources, their impact, and coping mechanisms. Findings indicate that the primary factors contributing to stress are psychological (individual traits, reactions to risk) and social (family and community support). Increased stress levels in military personnel have serious negative effects on their mental and physical health, reducing efficiency during both combat and peacetime duties. Long-term consequences of stress include post-traumatic stress disorder (PTSD), depression, anxiety, and other mental health disorders.

Recommendations

1. **Stress Management Training:** Specialized stress management training programs should be conducted for military personnel. These trainings should incorporate psychological support, breathing techniques, meditation, physical exercises, and other stress reduction methods. Additionally, team support and mutual assistance systems should be established.
2. **Enhancing Psychological Assistance:** Regular psychological support should be provided to military personnel. Specialized psychological counseling and therapy programs, including cognitive-behavioral therapy (CBT) and PTSD treatment methods, can help improve their mental health.
3. **Strengthening Social Support Systems:** Military organizations should focus on developing social support systems to reduce stress levels among service members. Strengthening family and community ties can help create a supportive environment for military personnel.
4. **Utilizing Virtual Reality and Innovative Methods:** Modern technologies such as virtual reality therapy and other innovative stress management techniques should be implemented. These methods can serve as effective tools for reducing stress, preparing for high-risk situations, and restoring psychological stability.
5. **Enhancing Family and Social Support:** Attention should be given to the family and social environment of military personnel. Improving family relationships, eliminating isolation, and enhancing social networks can help mitigate the negative effects of stress.
6. **Monitoring and Advanced Research:** Continuous monitoring of factors affecting the rise and reduction of stress levels in military personnel is necessary. Implementing new research and analysis methods can help refine stress management strategies and adapt them to the needs of military personnel.

References

- Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, 68(5), 748–766.
- Bryan, C. J., Morrow, C. E., Etienne, N., & Ray-Sannerud, B. (2009). Guilt, shame, and suicidal ideation in a military outpatient clinical sample. *Depression and Anxiety*, 30(1), 55–60.

- Friedman, M. J. (2014). History of PTSD in veterans: Civil War to DSM-5. *U.S. Department of Veterans Affairs*. Retrieved from https://www.ptsd.va.gov/understand/what/history_ptsd.asp
- Hoge, C. W., Auchterlonie, J. L., & Milliken, C. S. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *JAMA*, 295(9), 1023–1032.
- Litz, B. T., Gray, M. J., Bryant, R. A., & Adler, A. B. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, 29(8), 695–706.