



Defense mechanisms and quality of life in military personnel with a burnout syndrome

Mehanizmi odbrane i kvalitet života kod profesionalnih vojnih lica sa sindromom sagorevanja na radu

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Abstract

Background/Aim. Professional military personnel are exposed to a number of stressors during the war as well as in peacetime conditions that can cause some hidden or manifest disorders, especially anxiety and depression, but also the development of a burnout syndrome. The aim of our investigation was to determine the defense mechanisms and subjective assessment of quality of life and anxiety in professional military personnel of the Serbian Armed Forces with the burnout syndrome. **Methods.** The cross-sectional study included a total of 55 professional military personnel, from 25 to 55 years of age, without current mental problem. In the investigation, the Maslach Burnout Inventory (MBI), Defense Style Questionnaire (DSQ-40), World Health Organization Abbreviated Instrument for Quality of Life Assessment (WHOQOL-BREF) and Beck Anxiety Inventory were used. The statistical analysis included parametric and nonparametric descriptive statistics. **Results.** Emotional exhaustion and depersonalization were present in 10.9% of subjects and in 12.7% of subjects respectively, in moderate

level, while personal accomplishment was present in 21.8% of subjects of high level. Humor was higher in the subjects with a moderate level of burnout on the personal accomplishment (PA) scale and altruism in the subjects with a low level of burnout on the depersonalization (DP) scale as well as acting-out and rationalization on the PA scale in the subjects with a moderate level of burnout. High level of anxiety was present in 14.5% of subjects. **Conclusion.** Professional military personnel with lower level of burnout were less anxious, use mature defense mechanisms and have a perception of better quality of life. When burnout is diagnosed, psychological interventions requires training through the adoption of mechanisms for overcoming everyday stress, which may affect the reduction of anxiety and the improvement of the quality of life. Professional assistance, including psychotherapy is required in severe cases.

Key words:

burnout, professional; defense mechanisms; quality of life; military personnel; serbia; surveys and questionnaires.

Apstrakt

Uvod/Cilj. Pripadnici profesionalnog vojnog sastava su izloženi velikom broju stresora u toku ratnih ali i mirnodopskih uslova koji mogu dovesti do skrivenih ili manifestnih poremećaja, prvenstveno anksioznih i depresivnih, ali i razvoja burnout sindroma. Cilj našeg istraživanja bio je utvrđivanje mehanizama odbrane i subjektivne procene kvaliteta života kod profesionalnih vojnih lica Vojske Srbije sa sindromom sagorevanja na poslu – burnout sindromom. **Metode.** U istraživanje (studija preseka) bio je uključeno 55 pripadnika Vojske Srbije starosti od 25 do 55 godina života, koji nisu imali psihičke smetnje. U istraživanju su korišteni:

Maslach upitnik kvaliteta života (MBI), Upitnik mehanizama odbrane (DSQ-40), Upitnik kvaliteta života Svetske zdravstvene organizacije (WHOQOL-BREF) i Bekov upitnik za anksioznost (BAI). Za obradu podataka je korištena parametrijska i neparametrijska statistika. **Rezultati.** Emocionalna iscrpljenost i depersonalizacija su bile prisutne u umerenom stepenu kod 10,9%, odnosno 12,7% ispitanika, dok su lična postignuća bila prisutna kod 21,8% ispitanika u visokom stepenu izraženosti. Više skorove humora pokazali su ispitanici sa umerenim stepenom burnout-a na skali ličnih postignuća (PA), a altruizma sa niskim stepenom burnout-a na skali depersonalizacije (DP), kao i acting-out i racionalizacija na skali PA kod ispitanika sa umerenim stepenom burnout-a.

ut-a. Anksioznost je bila prisutna kod 14.5% ispitanika u visokom stepenu izraženosti. **Zaključak.** Profesionalna vojna lica sa niskim nivoom sindroma sagorevanja na radu su manje anksiozni, koriste zrele mehanizme odbrane i imaju percepciju boljeg kvaliteta života. Kada se uoči sindrom sagorevanja na radu, psihološka intervencija zahteva edukaciju kroz učenje veština savladavanja svakodnevnog stresa, čime

se može uticati na smanjenje anksioznosti i poboljšanje kvaliteta života. U težim slučajevima je potrebna i stručna pomoć, uključujući i psihoterapiju.

Ključne reči:

sagorevanje na radu, sindrom; odbrambeni mehanizmi; kvalitet života; kadar, vojni; srbija; ankete i upitnici.

Introduction

Professional military personnel are exposed to a number of stressors during the war but also in peacetime conditions. Those stressors can cause some hidden or manifest disorders, especially anxiety and depression, but also the development of a burnout syndrome.

A burnout in the military personnel is a construct delineating the psychological state resulting from non-effective strategies for coping with livable stress in the military environment. Long-term stress and frustration caused by effort in daily life, but also a role conflict and role ambiguity, promote or exacerbate the burnout, indicating that the military person's whole life and world are involved¹⁻³.

In the military environment, there are some risk factors for the burnout among different work places and duties, among military flying personnel, among soldiers and officers in the zone of operational actions and among medical staff, particularly among the intensive care nurses and the nurses in the department of psychiatry⁴⁻⁹. It exists in people who do some jobs connected with communications with other people. Persons who aspire to perfectionism have a particular tendency to this syndrome, as those with the unreal expectations and estimations connected with themselves and their own job. Some conflicts connected with the professional roles result in emotional exhaustion and ambivalent attitude to their job, low protection of co-workers and reduce working potential and create a sense of low accomplishment and low confidence¹⁰⁻¹³.

The persons with a high burnout manifest depression and anxiety that is reflected in their quality of life. Some investigations show that there is a negative correlation between subjective assessment of quality of life and burnout. That negative correlation can have serious consequences on the health of military personnel, but also on their productivity in the workplace^{14,15}.

Additionally, many studies have confirmed that the defense mechanisms and the quality of life are connected. It is clear that defense mechanisms constitute an important component of a person's adaptation¹⁶. The two central experiences in this regard are external stress and threat to the person's self. The focus on the anxiety and on the intrapsychic conflict is too narrow, although it is premature to dismiss the anxiety as the active component in all conditions that produce defense. The type of the coping mechanisms used in person's adaptation to the military environment that are associated with a lower burnout and psychological vulnerability is not sufficiently investigated.

In the concept of quality of life, the defense mechanisms and object relations are associated with quality of life^{16,17}. Bell¹⁷ indicates that the normal profile of object relations discloses the presence of the capability for healthy (mature) relationships while pathological object relations point out the failure of such ability. Regarding that perceptions and relationships are essential elements of the concept of quality of life, one might assume that object relations and ego defense mechanisms are associated with a person's quality of life and with the burnout syndrome, as well.

Few studies have so far dealt with the study of defense mechanisms present in the burnout syndrome¹⁸. What was proven in many studies is that the mature defense mechanisms ensure better mechanisms for coping with everyday stress by reducing the probability of significant anxiety and burnout syndrome^{19,20}.

The aim of our investigation was to determine the defense mechanisms and subjective assessment of quality of life in the professional military personnel of the Serbian Armed Forces with the burnout syndrome.

Methods

This cross-sectional study was conducted in the three barracks of the infantry units of the Serbian Armed Forces, in September 2016.

In this study a total of 55 randomly selected professional military personnel (officers, non-commissioned officers and contract soldiers) which were at higher professional load (duty service, guard, overtime, inability to use the days off) were included. Only those without current mental problem and who volunteered to take part in the investigation were included. Written informed consent was obtained from all participants prior to participation in the study. All participants were assured of the anonymity and that only group-level findings would be reported. The sample for the pilot study was formed with about 15% of the main study, and it made 47 respondents. After that, another 10% of respondents were added, due to the possibility if they did not fully respond to the questionnaire. In that way, it was formed a sample of 55 patients, with the decision to be in error alpha level of 0.05, a beta error of 0.1 on the border, which gave strength studies of 90%.

This study was conducted with the approval of the Ethics Committee of the Faculty of Medicine, Kragujevac. The study was approved by the General Staff of the Serbian Armed Forces, too. Confidentiality of the response was assured. A special permit for the research in the units of the Serbian Armed Forces was obtained from the Ministry of Defence.

The study was a research within the doctoral thesis that is being done at the Medical Faculty of Medical Sciences, University of Kragujevac.

Psychological instruments

The sociodemographic questionnaire included the questions about the age, gender, education, marital, professional and health status.

The psychometric assessments of the burnout, defense mechanisms, quality of life and anxiety were made by using: Maslach Burnout Inventory (MBI)²¹, Defense Style Questionnaire (DSQ-40)²², World Health Organization Abbreviated Instrument for Quality of Life Assessment (WHOQOL-BREF)²³ and Beck Anxiety Inventory (BAI)²⁴.

The MBI is the most commonly used instrument to assess burnout. The MBI consists of 22 items. According to the MBI manual, it contains three subscales, which measure 3 components of burnout: emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA). The 9-item EE subscale assesses feelings of being emotionally overextended by one's work. The 5-item DP subscale measures having an unfeeling and impersonal response towards the recipients of one's services. The 8-item PA subscale assesses feelings of competence and successful achievement. Each item could be answered on the 7-point Likert scale ranging from "never" (= 0) to "daily" (= 6). The burnout is indicated by high scores on emotional exhaustion and depersonalization and the low scores on personal accomplishment.

The DSQ-40 is the 40-item self-report questionnaire. It is one of the most widely used psychometric instruments for assessing the ego defense mechanisms. According to the manual, it broadly categorizes 20 defense mechanisms into three hierarchies: mature, neurotic and immature defense mechanisms, similar to Vaillant's²⁵ hierarchy of the ego defense mechanisms. The defense mechanisms are classified into: (a) four mature – sublimation, humor, anticipation, and suppression; (b) four neurotic – undoing, pseudo-altruism, idealization, and reaction formation; and (c) twelve immature – projection, passive aggression, acting out, isolation, devaluation, autistic fantasy, denial, displacement, dissociation, splitting, rationalization and somatization. Each of the defense mechanism is covered by the two items, that are rated on the nine-point scale from 1 (completely disagree) to 9 (completely agree). The average scores for the two items are used to determine the individual defense mechanism²². In our investigation, we compared our results with the results of Serbian authors²⁶.

The WHOQOL-BREF is a self-report quality of life inventory. It consists of 26 items, rated on a 5-point scale that measures the following four broad domains: physical health, psychological health, social relationships and environment. The physical health domain includes the questions about daily activities, dependence on medication and treatment, energy and exhaustion, mobility, pain and discomfort, sleep and rest and capacity to work. The psychological health domain consists of the questions about positive and negative feelings, self-esteem, body image and external image, personal beliefs and attention.

The social relationship domain consists of the questions about relationships with others, social support and sex life. The environmental domain of the scale consists of the questions about the home environment, physical security and safety, financial resources, availability of health services, leisure activities, physical environment and transportation. This shortened instrument was validated in various international field trials. It is considered appropriate to measure quality of life of the healthy population as well of ill population²³. A permission to use the Serbian version is obtained from the World Health Organization (WHO).

The BAI is unspecific self-questionnaire. It served as the primary outcome for measuring the severity of anxiety in participants suffering from different primary anxiety disorders²⁴. The BAI assesses emotional, physiological and cognitive aspects of state anxiety. It consists of 22 items, rated on the 4-point Likert²⁷ scale ranging from 0 = not at all to 3 = severely. The categorical anxiety levels consist of the minimal (0–7 points), mild (8–15), moderate (16–25) and severe (26–63) anxiety²⁴.

Statistical analysis

The statistical analysis included parametric and nonparametric descriptive statistics, depending on the nature of data. The data analysis was carried out by using the IBM SPSS (Statistical Package for the Social Sciences) software version 20.0.

For the normal distribution of all numerical parameters and scores, we used the Kolmogorov-Smirnov test. We got the results showing that in all monitored and calculated parameters and scores there was the normal distribution (z was less than 1.96, and $p < 0.05$), so that it was possible to apply the parametric methods in further analysis.

The subjects, according to the values of the MBI (Emotional exhaustion, Depersonalization and Personal accomplishment) scores were divided into 3 groups, with the high, moderate and low burnout, within which the values of the defensive mechanisms, anxiety and quality of life were compared.

Results

Professional military personnel were aged from 25 to 55 years (74.5% were older than 30 years). A number of the male subjects was significantly higher than the female ones (87.3% of males; $\chi^2 = 6.047$; $p < 0.01$). There were significantly more subjects with secondary school and university (50.9%) in relation to other categories of education completed (30.9%; $\chi^2 = 7.449$; $p < 0.01$). There were significantly more military personnel who were married (65.5%) compared to single ones (unmarried; 10.9%) and other (widowed/divorced; 23.6%) categories of marital status ($\chi^2 = 7.267$; $p < 0.01$). The presence of the somatic diseases (hypertension, diabetes) were registered in a relatively small number of subjects (7.3%) compared to those who were healthy (92.7%; $\chi^2 = 10.119$; $p < 0.01$). The sociodemographic variables showed that there were the statistically significant differences by all observed features (Table 1).

Table 1
Sociodemographic characteristics of military personnel (n= 55)

Variable (listed level versus other)	% of subjects	χ^2	<i>p</i>
Gender (male)	87.3	6.047	< 0.01
Age (>30 years)	74.5	5.577	< 0.01
Education (>12 years)	50.9	7.449	< 0.01
Marital status (married)	65.5	5.267	< 0.01
Health status (somatic diseases presence)	7.3	10.119	< 0.01

Table 2
Defense mechanisms, quality of life and anxiety in military personnel with burnout syndrome

Defense mechanisms/Variable	MBI EE		MBI DP		MBI PA		BAI (anxiety)	
	low	moderate	low	moderate	low	moderate	high	minimum mild
	<i>p</i>		<i>p</i>		<i>p</i>		<i>p</i>	
Mature								
humor	> 0.05	< 0.05	< 0.01	< 0.05	< 0.01	< 0.05	< 0.05	< 0.05
anticipation	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
suppression	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
sublimation	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
Neurotic								
altruism	> 0.05	> 0.05	> 0.05	> 0.05	< 0.05	> 0.05	> 0.05	> 0.05
reaction formation	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
undoing	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
idealization	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
Immature								
fantasy	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
projection	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
dissociation	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
somatization	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
rationalization	> 0.05	> 0.05	> 0.05	> 0.05	< 0.05	< 0.05	< 0.05	< 0.05
displacement	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
isolation	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
acting out	> 0.05	< 0.01	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
devaluation	> 0.05	> 0.05	> 0.05	> 0.05	< 0.05	< 0.05	> 0.05	> 0.05
denial	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	< 0.05	< 0.05
passive aggression	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
splitting	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
BAI	< 0.05	< 0.01	> 0.05	> 0.05	> 0.05	> 0.05	-	-
BREF								
psychological health	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	< 0.01	< 0.01
social relationships	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	< 0.05	< 0.05
environment	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05	> 0.05
physical health	< 0.01	< 0.05	> 0.05	> 0.05	> 0.05	> 0.05	< 0.01	< 0.01

BAI – Beck Anxiety Inventory; BREF – Quality of Life Assessment; MBI – Maslach Burnout Inventory; EE – emotional exhaustion; DP – depersonalization; PA – personal accomplishment.

Based on the results obtained by the MBI on the EE subscale, it was observed that 49/55 (89.1%) of subjects were with the low level of burnout, 6 (10.9%) of the moderate level, but none with the high level of burnout.

On the DP subscale in 48/55 (87.3%) of subjects, it was observed the low level of burnout, in 7 (12.7%) the moderate level, but no subject with the high level of burnout.

On the PA subscale in 36/55 (65.5%) of subjects the low level of burnout was observed, in 7 (12.7%) the moderate level, and in 12 subjects (21.8%) the high level of burnout.

The DSQ-40 questionnaire showed that there were no statistically significant differences in the average score of the group of mature, immature and neurotic defense mechanisms in the subjects with the low and moderate levels of burnout.

Table 2 shows defense mechanisms, quality of life and anxiety in the military personnel with the burnout syndrome. In the

group of immature defense mechanisms, there was a statistically significant difference in the subjects with the moderate and low burnout in acting out ($p < 0.01$) compared to the depersonalization scale, with the values lower in the low burnout and higher at the moderate level of burnout. There were also the statistically significant differences in rationalization and devaluation in relation to the personal accomplishment subscale ($p < 0.05$), with the lowest levels of rationalization at low level of burnout, a little more higher at the high level of burnout, and the highest in the moderate burnout, while the devaluation is the lowest in the moderate burnout, a little more higher in the high burnout and the highest at the low level of burnout. The overall average values of the immature defense mechanisms were higher in those with the low burnout.

In the group of the mature defense mechanisms, humor was significantly higher in the subjects with the moderate le-

vel of burnout on the DP subscale ($p < 0.05$). On the PA subscale, humor was significantly lower in the subjects with the moderate level of burnout compared to those with the low and high levels of burnout ($p < 0.01$). The overall average values of the mature defense mechanisms did not differ in those with the low and moderate levels of burnout on the EE and the DP scales as well as low, moderate and high levels on the PA scale.

In the group of the neurotic defense mechanisms, there was no statistically significant difference between the average score of the neurotic defense mechanisms in people with the low and moderate levels of burnout. However, on the PA subscale altruism was higher in the subjects with the low level of burnout and the lower in those with the moderate and high levels of burnout ($p < 0.05$).

The BAI questionnaire registered the low level of anxiety (0 do 21) in 46 (83.6%) of subjects, the moderate level (22 do 35) in 1 (1.8%) subject, and the high level (more than 36) in 8 (14.5%) subjects.

The BAI questionnaire score decreased with the increasing level of education of the subjects, so that the highest average values were observed in the subjects with the lowest education, and the lowest average values in those with the highest level of education.

Comparing the average scores of the results obtained on the scale of anxiety (BAI questionnaire) and burnout (MBI), it was observed that the subjects with the moderate level of burnout ($p < 0.01$) had the significantly higher BAI questionnaire scores on the scale of emotional exhaustion ($p < 0.05$) and depersonalization ($p < 0.01$).

Comparing the average values of the results obtained on the scale of anxiety (BAI questionnaire) and DSQ 40 questionnaires, it was evident that there were the statistically significant differences in regard to humor, rationalization and denial ($p < 0.05$) in the subjects with minimal and mild anxiety ($p < 0.05$).

Comparing the average values of the results obtained on the scale of anxiety (BAI questionnaire) and the WHOQOL-BREF, it is observed that the subjects with the lower values of psychological and physical health ($p < 0.01$) and satisfaction with social relations ($p < 0.05$) had the significantly higher scores on the BAI questionnaire.

The BREF questionnaire showed that there was a statistically significant positive correlation between quality of life and the moderate level of burnout on the subscales of EE ($p < 0.05$) and DP ($p < 0.01$), but not on the subscale of PA.

The comparison of the BREF questionnaire and MBI, DSQ-40 and BAI indicates that there was a negative correlation with all of the above scores, which means that the higher values of the BREF scores were correlated with the BAI questionnaire lower scores (Figure 1), on the EE (Figure 2) and the DP scales on the Maslach et al.²¹ questionnaire as well as with the overall average score of the group of immature defense mechanisms on the DSQ 40, and vice versa.

There was a statistically significant correlation between the values of the BAI total score and all three subscales of the Maslach et al.²¹ questionnaire taken individually. Thereby, there was a positive correlation with the subscales

of EE (Figure 3) and DP and the negative with the subscale of PA (Figure 4). Certainly, the higher value of the BAI score, the higher values of EE and PA subscales at the MBI were, and vice versa.

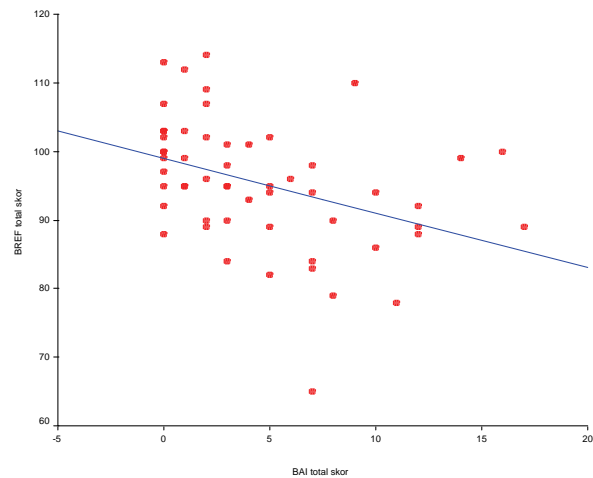


Fig. 1 – Correlation between BREF total and BAI total. BAI – Beck Anxiety Inventory; BREF – Quality of Life Assessment.

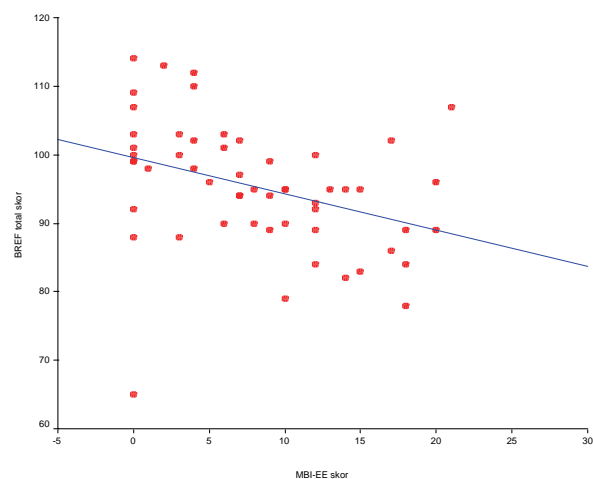


Fig. 2 – Correlation between BREF total and MBI-EE. BREF – Quality of Life Assessment; MBI – Maslach Burnout Inventory; EE – emotional exhaustion.

By analyzing the correlation of the scores obtained in the BREF, Beck et al.²⁴, Maslach et al.²¹ and the DSQ-40 questionnaires, it is evident that there was a statistically significant negative correlation of the BREF questionnaire score with the BAI questionnaire score, regarding the subscales of EE and DP in the MBI questionnaire and the average score of the immature defense mechanisms in the DSQ-40.

A comparison of the average values of the MBI and BAI scores showed that the subjects with the moderate level of burnout had the significantly higher scores on the scales of EE and DP, while their average values on the physical health score were lower in the subjects with the low level of burnout. Other scores were not significantly different compared to the level of burnout on the subscale of emotional exhaustion.

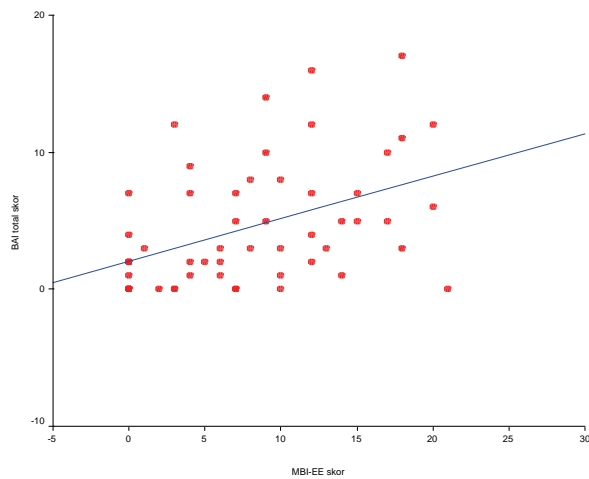


Fig. 3 – Correlation between BAI total and MBI-EE.
BAI – Beck Anxiety Inventory; MBI – Maslach Burnout Inventory; EE – emotional exhaustion.

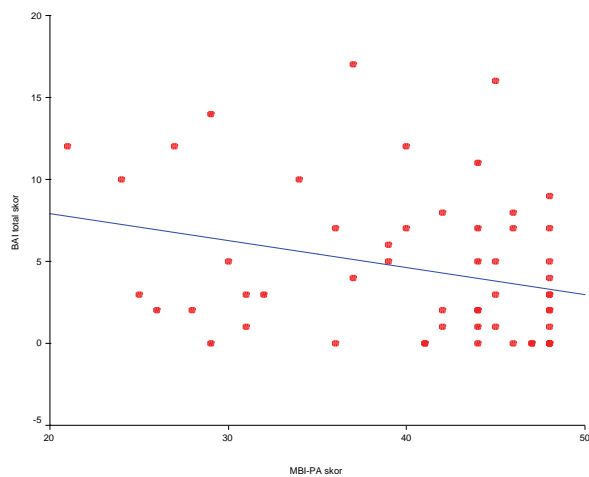


Fig. 4 – Correlation between BAI total and MBI-PA.
BAI – Beck Anxiety Inventory; MBI – Maslach Burnout Inventory; PA – personal accomplishment.

Discussion

Burnout is the result of prolonged stress in the workplace²⁸. Inability to cope efficiently with workplace stressors can lead to negative psychosocial and physical outcomes. Job satisfaction level is an important factor influencing the health of military personnel. The military personnel is confronted with stress in the workplace that indicates the current, but transient, maladaptation process. Their burnout was a result of their psychological state resulting from maladaptive coping strategies with enduring stress in interpersonal communication in the military environment. It is accompanied by the physical and psychological symptoms and occurs when the adaptive capabilities of the employees are at odds with the demands of the working environment. Burnout, on the other hand, can be considered as the last stage in the process of maladaptation, when the phase of resistance gives way to collapse²⁹.

Burnout is promoted by a role conflict and role ambiguity, or prolonged job stress and frustration caused by strain in daily life. Burnout is an indicator that the military personnel had impossible expectations of themselves in all social roles they have. They are emotionally exhausted, depersonalized, and with a low personal accomplishment. In addition, the burnout may be caused by the mismatch between the nature of the work and personality. Coping with the burnout syndrome intensifies the so-called resilience representing permanent strengths or aspects of personality that help a person to rise above life's misfortunes and build an effective style of struggle with problems, leading to the actualization of the human capacities (individual, group and community) aimed at purposeful confrontation with stressful circumstances in an emotionally and physically healthy way. Whether there will be a burnout or not, it depends on many factors along with the personality structure as a particularly significant and its reflection of practical manifestation, ranging from the powerless and weak with low frustration tolerance, to the stable and strong with high frustration tolerance^{28,30}.

There are some investigations in the military environment where authors examined a relationship among depression, anxiety and job stress, work performance and perceptions about supervisors in military personnel. The occurrence of the burnout in the military environment was first observed in pilots and flight crew³¹. A survey carried out in the Wilford Hall U.S. Air Force Medical Center Mental Health Clinic showed that 60% of employees had a workplace stress, and in 52% of these it was caused by the emotional problems³². Research in the FE Warren Air Force Base (United States), showed that the military personnel in relation to the civil personnel had stress in the workplace more frequently, with more than a quarter to a significant degree, while 15% said that stress was caused by the significant emotional problems³³.

Our investigation showed that more than 10% of military personnel had the moderate level of the burnout, but without the high level observed. In comparison with the investigations in other armies, the burnout in the Serbian Armed Forces was less frequently observed than in other armies.

In our investigation, a job satisfaction and job burnout appeared closely linked inversely. The military personnel showed that the job burnout is present when job satisfaction decreased because of the financial and social effects of job dissatisfaction and the damaging physical/psychological impacts of the burnout³⁴.

Negative way of considering the stressors is associated with anxiety. The burnout syndrome was associated with anxiety, as confirmed by the results of our research, where in over 16% of the subjects, the presence of anxiety at the moderate and high level was found. Our research showed that the level of anxiety was positively correlated with the level of burnout on the EE subscale ($p < 0.05$), as shown with the DP subscale ($p < 0.01$). Negative reaction involves emotional focus, slow or weak reaction or absence of any attempt at solving the problem. However, despite numerous studies that have been carried out, the relationship between these two disorders is not clear. Anxiety is defined as the feeling of a floating fear, embarrassment and uneasiness. It is a normal re-

action to a stressful situation, however, if it lasts longer and if the person can not control it, then it is the anxiety disorder.

Facing the stressor, the individual activates positive or negative ways of coping with the stressful situation³⁵. Use of the defense mechanisms alters individual perception of both internal and external reality³⁶. In our investigation we found that in the professional military personnel the mature defense mechanisms were associated with the lower level of burnout syndrome, less anxiety and better perception of quality of life.

As shown by the results of our research, the mature defense mechanisms were associated with a good attitude to stress and good mental and physical health, while in the immature defense mechanisms, better perception of quality of life was followed by the lower level of anxiety, and lower level of burnout syndrome.

In addition to the above, many studies have confirmed that the mature defense mechanisms are associated with the higher level of quality of life^{37,38}. Recent Integrative models of defense and coping present a more differentiated picture with consideration to these issues: coping includes unconscious and conscious strains, defense and coping serve very similar functions, adaptiveness can be determined in quantitative (coping) and qualitative (defenses) terms and the question of stability of coping and defense needs to be more completely explored empirically. Moreover, the nature of the underlying fear can be theoretically differentiated and related to the difference between defense and coping^{16,17}.

People who developed the mature mechanisms are generally happier and have better mental health than individuals who use immature mechanisms. According to DSM-IV, the mature level of defensive functioning "results in optimal adaptation in the handling of stressors," whereas these defenses strive to "maximize gratification and allow the conscious awareness of ideas, feelings, and their consequences, promoting an optimum balance among conflicting motives"^{30,39}.

Using of altruism and humor as the "mature" defense mechanisms helps the military personnel to cope with tense or stressful situations³⁷. In our research we obtained results that showed the greatest impact on the protection of the burnout on the subscales of depersonalization. The strongest impact on the level of anxiety had humor, while the most protective influence had humor and altruism on the scale of personal satisfaction.

Using humor, they make fun of uncomfortable situations or express unpleasant thoughts in a humorous way, allowing the military personnel to tolerate uncomfortable situations and to openly express feelings and thoughts without personal discomfort or immobilization and without producing the feeling of discomfort in others. Looking for a funny facet in military environment, in which they lack control, can help them to bear it, and it can even be an altruistic act in helping others to cope better as well.

The presence of altruism could be explained by a personal satisfaction with a successful professional functioning. The military personnel undergo a vicarious experience through constructive and instinctually gratifying service to others. Altruistic behavior, an act of goodwill to another person, can be used as a way of diffusing a potentially anxious situation. Altruism may be used as a defense mechanism, by

being especially helpful to a person who they feel might dislike them or neutralizing an argument with positivity and kind words. Appreciation therefore plays a unique role in social contacts. They feel thankful when they benefited from someone's costly, intentional, voluntary effort on their behalf⁴⁰.

In addition, in our research, the immature defense mechanisms, primarily acting out, proved to be a defense mechanism that are used by more persons with the moderate levels of burnout in the DP subscale, which is in accordance with the results of numerous studies where this defense mechanism is associated with maladjustment behavior⁴¹. Rationalization and devaluation have a significant influence on the development of the burnout subscales measured by the subscale PA. Some researches show that the immature defense mechanisms are significantly more likely used in the anxiety and depressive disorders and that devaluation and projections are significantly higher in the depressive disorders compared to the anxiety disorders. Since the components of all three disorders intertwined, we can say that more investigations are needed to differentiate the defense mechanisms important for the development of burnout⁴².

Mutual comparison of the BREF questionnaire and the MBI, DSQ-40 and the BAI indicated that there was a negative correlation with all of the above scores. That means that the higher values on the BREF scores are correlated with the lower scores on the BAI questionnaire, on the emotional exhaustion (EE) and depersonalization (DP) scales on the Maslach et al.²¹ questionnaire as well as with the overall average score of the group of immature defense mechanisms on the DSQ 40 and vice versa.

There was a statistically significant correlation between the values of the BAI total score and all three subscales of burnout, which is consistent with the results of other studies^{43,44}. Therefore, on the basis of our study, learning the adequate mechanisms for overcoming everyday stress significantly influences the reduction of the appearance of burnout and to become aware of the mechanisms that act protectively, further investigations are needed in this area.

Limitation

Our investigation of burnout was conducted as a pilot study on a relatively small sample of the Serbian Armed Forces. Further investigation should be focused on a much larger sample size of the professional military personnel of the Serbian Armed Forces (300 military personnel), which would allow insight into the presence of burnout among the different categories of military personnel (officers, non-commissioned officers and contract soldiers). In addition to further investigations, this issue could indicate certain differences in the occurrence of burnout, depending on the type of job position, years of service, age and gender of the subjects.

Conclusion

The professional military personnel with a lower level of burnout at work were less anxious, use mature defense mechanisms and have a perception of better quality of life.

When burnout is diagnosed, the psychological interventions requires training through the adoption of mechanisms for overcoming everyday stress, which may affect the reduc-

tion of anxiety and the improvement of the quality of life. Professional assistance, including psychotherapy is required in severe cases.

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