

STUDII ȘI CERCETĂRI

STRESS AND RESILIENCE IN MILITARY PERSONNEL

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Abstract

Research purpose. The reactions of military personnel in response to critical events have an impact on public order and security. The purpose of this study is to analyse the mediating role of internal and external resources in the relationship between operational stress and resilience in military gendarmes involved in current peace-time high-risk missions. *Methodology.* Participants were 214 military gendarmes, who completed five self-report scales regarding operational stress, resilience, self-efficacy, professional commitment, and leadership styles and evaluated the perceived efficiency of the psychological training. *Results.* The results show that, when analysed separately, internal resources (occupational commitment and perceived self-efficacy) act as partial mediators in the relationship between operational stress and resilience. When the mediating role of external resources is analyzed separately, they also partially mediate the same relationship. Following the simultaneous introduction as mediators of both categories of resources, only occupational commitment and perceived self-efficacy remain partial mediators in the relationship between operational stress and resilience. Considering the importance of this profession in society, the results can contribute to the prevention of negative events by promoting adequate psychological intervention strategies specifically based on individual resources.

Cuvinte-cheie: stres operațional, reziliență, angajament în muncă, auto-eficacitate percepută, stil de management

Keywords: operational stress, resilience, occupational commitment, perceived self-efficacy, management style

1. INTRODUCTION

Stress is a reality of day-to-day life in many professional contexts. Military gendarmes must make correct, efficient, and quick decisions when facing mission-specific stress factors to maintain the safety of all those involved. Exposure to adversity and trauma is a significant aspect of high-risk military missions. Being apart from family and friends, traveling often, and austere conditions all represent additional psychological burdens for military personnel and contribute to an increase in stress levels (Lee *et al.*, 2013). In the military environment, stress is manifested most often through the combined effects of cognitive overloading, physical effort, lack of rest, loss of energy, extreme environmental conditions, and uncustomary physical and emotional demands. In an uncertain, complex, and vague environment, the consolidation and support of resilience must be a priority (Nindl *et al.*, 2018).

For military gendarmes, preserving mental health is just as important as preserving physical health. Given the possibility that operational stress can have detrimental outcomes, this study is the first to clarify the relationship between stress and resilience in military gendarmes. As a result of their high-risk missions

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in which they participate, military personnel face a significant number of psychological problems, such as depression or anxiety (Gates *et al.*, 2012) or post-traumatic stress disorder (PTSD) (Javidi & Yadollahie, 2012). Despite this, the effects of stress depend not only on the intensity and severity of the stressors, but also on the strategies used to face them (Wood & Bhatnagar, 2015).

Confronting stressors means also efficiently and actively engaging personal resources to minimize negative effects (Folkman & Lazarus, 1980), being linked to resilience (Southwick *et al.*, 2014). Resilience reduces vulnerability to high-risk experiences, helps in overcoming stress and adversity, and contributes to good results despite high-risk experiences (Rutter, 2006). It is a dynamic concept in which efficient coping mechanisms, changes in the mental set, psychological habits, and alterations in perceived self-efficacy can lead to important success in the context of continuous difficulties (Rutter, 2012).

This study examines the mediating role of internal resources (occupational commitment and perceived self-efficacy) and of external resources (perceived efficacy of psychological training and management style) in the relationship between operational stress and resilience in military gendarmes.

Stress and resilience in military personnel

The present study addresses operational stressors specific to peacekeeping missions in which military gendarmes are involved, on the basis of exposure to traumatic events, crime, aggression, interaction with criminals and their victims, unpredictable events (He *et al.*, 2012), and confrontation with the justice system (Burke & Mikkelsen, 2006). Permanent exposure to violence and dangerous events is added to these, having a negative effect on mental and physical health (Dowler & Arai, 2008).

Studies consider resilience to be a dynamic process of adjusting to adversities and ever-changing demands (Kalisch *et al.*, 2019). The term “resilience” refers to a positive type of adaptation in the context of danger or adversity and represents the ability of an individual to successfully react to acute stress, trauma, or detrimental situations (Reich *et al.*, 2010). Individuals with a high level of resilience are less likely to develop mental health issues proportional to the suffered stress, less influenced by stressors, less lonely, have better social adaptation skills, and experience a greater level of psychological comfort (Kalisch *et al.*, 2021).

Studies mention that confrontation with stressful experiences can contribute to faster physiological and emotional recovery and resilience (Tugade *et al.*, 2004). Some researchers mention that certain characteristics of resilience manifest themselves after exposure to trauma as part of the post-traumatic growth process, thus leading to psychological development and often having a deeply positive effect on the individual (Calhoun & Tedeschi, 2006). In reference to military personnel, Terte *et al.* (2014) mention that resilience is a combination of optimism, flexible coping mechanisms, emotional stability, mental health practices, and social support and is defined as the ability to overcome the negative effects of setbacks and performance- and combat-induced stress (Nindl *et al.*, 2018). Following life-endangering combat situations, resilience prevents mental and physical health decay (Nindl *et al.*, 2018) and protects military personnel from the negative effects of exposure to traumatic events (Eisen *et al.*, 2014).

The effects of stress on resilience can manifest depending on the intensity and duration of exposure (Oken *et al.*, 2015). The stress response can range from a state of relaxation to a state of high physiological activation. If the response to the stressor is too sustained or frequent, this causes negative effects mentally or

physiologically (Oken *et al.*, 2015), such as a decrease in resilience. Studies provide an overview of the interaction between stress and resilience within different demographics. Despite this, no studies examining the effect of operational stress on the resilience of military gendarmes could be identified.

The mediating role of internal resources: occupational commitment and perceived self-efficacy

The specialized literature mentions resilience as a dynamic process (Waugh & Koster, 2014), influenced by a number of inter and intrapersonal factors. Determining the psychological variables with a role in the development of psychological resilience are key elements in the development of interventions to ensure the resilience of military gendarmes working in a high-stress environment. Gendarmerie soldiers adhere to a strong code of ethics, guided by work commitment, responsibility and integrity. They also show permanent resistance and competitiveness, elements that are based on perceived self-efficacy. In this sense, this research addresses the role of internal resources: commitment to work and perceived self-efficacy, in the relationship between organizational stress and resilience, at the level of military gendarmes.

Self-efficacy is related to an individual's past experiences, core beliefs, and spiritual beliefs and has an important impact on how the individual manages stressors (Rees *et al.*, 2015). Perceived self-efficacy has been found to play a key role in determining reactions to stress, being related to the quality of coping with stressful and threatening situations (Bandura, 1997). It represents the interpretation that individuals give to their own training and achievements (Hudson, 2007) and directly affects the motivation to succeed in future situations (Pajares, 1996). Thus, perceived self-efficacy is strongly associated with resilience (Li & Nishikawa, 2012), generating its increase (Luthans *et al.*, 2006) and determines lower levels of anxiety, better adaptability and lower intentions to leave the place of work (Saks, 1994).

Work commitment is a psychological condition that determines the employee's strong desire to stay in the organization (Meyer & Allen, 1991). Work engagement is characterized by the association of three factors: strong acceptance of the organization's values and goals, the willingness to exert effort on behalf of the organization, and the desire to maintain its membership (Vakola & Nikolaou, 2005). The literature states that workplace stressors correlate negatively with work engagement (Podsakoff *et al.*, 2007). Likewise, work engagement correlates significantly positively with resilience (Vohra & Goel, 2009).

Professional, loyal, capable and dedicated military personnel must be active within the gendarmerie. This is necessary due to the unique conditions of working in the military, involving plenty of long-term, high-risk missions. Military gendarmes respect a strong code of ethics, which is based on principles guided by occupational commitment, integrity and responsibility. *Occupational commitment* is a process of interaction between three components: (1) affective commitment, representing the emotional attachment felt by the serviceman towards the facility in which they work; (2) continuance commitment, which manifests itself when the serviceman remains in the organization, knowing that it would be difficult to find another job or being aware of the big investments that were made; and (3) normative commitment, representing a commitment obligation, in which the serviceman perceives the organization as an obligation (i.e. a calling) (Tella *et al.*, 2007).

Occupational commitment is strongly connected to perceived stress (Lee *et al.*, 2000) and resilience (Wang *et al.*, 2018). Military personnel with a high commitment level report a lower stress level and a higher health level in comparison to those who are more detached from their profession (Harris *et al.*, 2005). Organizational involvement helps employees find a purpose in their work (Wrzesniewski *et al.*, 2003), to have a positive perception of the support from the organization and the leader (Lee *et al.*, 2000), which aids in the development of resilience. Occupational commitment has a negative association with stress factors, depression, and psychological suffering (Andrew *et al.*, 2008) and a positive association with resilience (Vohra & Goel, 2009) in the case of police officers.

Both in professional training and during missions, the gendarme must reach high-performance standards, while facing multiple risk factors. *Self-efficacy* plays an important role in resistance and competitiveness that officers and noncommissioned officers need to prove. The concept of perceived self-efficacy refers to the belief regarding the ability of an individual to perform well in challenging situations (Bandura, 2010). This is a resistance resource in the process of cognitive evaluation, and it is essential for the management of high-stress, potentially traumatizing situations (Benight & Bandura, 2004). A higher level of perceived self-efficacy leads to better control of stressors (Kashdan & Roberts, 2004), while a lower level is associated with symptoms of depression, anxiety, and a low level of psychological well-being (Bandura *et al.*, 2003).

Regarding the relationship between perceived self-efficacy and resilience, both concepts are positive personal characteristics – the aspect they have in common is the individual's ability to persevere when facing difficulties. Despite the similarities, the two are distinct, independent psychological resources: perceived self-efficacy refers to accomplishing tasks, while resilience refers to adaptability to change and the ability to overcome challenges (Schwarzer & Warner, 2013). Self-efficacy is task-oriented, while resilience touches more on preventing failure and recovering from adversity (King *et al.*, 2016). The development of resilience depends on the level of perceived self-efficacy (Luthans *et al.*, 2006). Being the belief in one's capacity to face change (Rutter, 2006), perceived self-efficacy affects the individual's ability to be resilient (Bandura, 1997).

A high level of perceived self-efficacy aids in the development of resilience in two ways. First, it increases belief in one's competence and control over a situation (Benight & Bandura, 2004), which in turn allows a proactive response essential to resilience (Prilleltensky *et al.*, 2001). Second, perceived self-efficacy influences the perception of difficult situations, changing threats into challenges (Bandura, 1977). When individuals see difficult situations as challenges, they will continue to act to reach solutions (Luthans *et al.*, 2006). Self-efficacy represents the willingness to develop and confidence in one's abilities, which in turn leads to the proactive development of resilience (Luthans *et al.*, 2006).

The mediating role of external resources: management style and perceived effectiveness of psychological training in military gendarmes

Management style refers to the behavior a manager uses when trying to persuade subordinates to reach the organization's ideal performance (Hersey & Blanchard, 1977). A leader's efficacy is measured through their capacity to motivate and position their subordinates towards a common goal (Ahmad *et al.*, 2014). This study is based on Bass's theory of transformational leadership (1985), which points out a leader's ability to change the subordinates' interest from a

personal one to a group-oriented one with the purpose of achieving higher performance levels. This theory has also been applied within the military field, where it was demonstrated that leaders are able to aid in the development of their followers, increasing their performance beyond expectations (Dvir *et al.*, 2017). In military organizations, transformational leadership is a trait specifically present in commanders who inspire, motivate, influence, and stimulate their subordinates, helping them build confidence in themselves and in common goals (Warrilow, 2012). Transactional leadership is a management style based on fulfilling obligations, determining goals, monitoring, and controlling. In the military environment, transactional leadership refers to the way in which commanders use rewards and punishments to make subordinates comply with orders (Odumeru & Ogbonna, 2013). The passive-avoidant style corresponds to the leader who avoids making decisions, abdicates responsibility, and does not use their authority (Antonakis *et al.*, 2003).

Leadership style is associated with the level of stress experienced by subordinates, as it influences their perception of traumatic events and available adaptative resources (Rowold & Schlotz, 2009). Studies mention that the transformational management style is more efficient than the transactional one (Bass & Avolio, 2007), and helps subordinates avoid stress by reframing disruptive events (Rowold & Schlotz, 2009). If they manage to communicate a positive view on stress-inducing events through the discussions and policies applied, the leaders have a positive influence on the whole group (Bartone, 2012).

Military training refers to the development of workplace-related skills with the purpose of increasing professional performance (Meyer, 2016), and it involves many social, physical, and physiological challenges (Gruber *et al.*, 2009). Military organizations rely on the capacity of personnel to accomplish difficult tasks at high-performance levels (Kiszely, 2007), developed by increasing operational awareness and encouraging correct decision-making in a short time period (Goldfein, 2014). Military adaptability to crisis situations can be improved and developed (Goldfein, 2014) through psychological training.

Psychological training has a primary prevention purpose, through the reinforcement of stress-adjusting strategies and the development of resilience prior to exposure to stressors, or a secondary prevention purpose, following exposure to stressors, to dampen or prevent the negative effects of exposure to traumatic events (Kowalski *et al.*, 2012). In other words, the main purpose of the interventions within the army or police force is to reduce the stress level and to increase the belief that negative events can be planned and controlled (Steingraber *et al.*, 2022). Psychological training activity covers many methods and techniques meant to reduce and weaken the stress in difficult situations, and to produce a healthy response to stressors by using personal resources to handle emerging demands (Kaluza, 2018).

Military personnel constantly take part in psychological training programs to strengthen their ability to face stress, problems (Robles, 2010), and difficulties regarding accomplishing work-related tasks or interpersonal relationships. Psychological training offers the instruments necessary to increase sensory perception and cognitive abilities – allowing for optimal reactions to challenging situations – as well as methods of preventing exhaustion through gradually distributing effort (Andersen *et al.*, 2015). Most interventions based on increasing risk awareness, providing strategies to manage them, shifting to a positive focus,

and developing interpersonal abilities have proven their use in diminishing stress (Boermans *et al.*, 2012).

Military training during peacetime is meant to ensure good performance in conflict situations by increasing functionality in adverse conditions characterized by low control, high stress, and uncertainty (Nakkas *et al.*, 2016). Researchers have developed psychological training programs that increase resilience and tackle stress-related issues, both in the police (Arnetz *et al.*, 2013) and in the military environment; they noticed that by increasing awareness of stress-managing techniques and their control purposes, health and performance are improved (Arnetz *et al.*, 2013). Regardless, it is still unclear if the psychological training's perceived efficiency can contribute to explanation of the increasing resilience when facing operational stress factors.

2. METHOD

2.1. RESEARCH OVERVIEW AND HYPOTHESES

Considering the previously mentioned theoretical and empirical framework, our main hypotheses are as follows:

Hypotheses 1: The perceived stress level of military gendarmes is a significant negative predictor of resilience.

Hypotheses 2: Internal resources, occupational commitment and self-efficacy, mediate the relationship between perceived stress and resilience in military personnel.

Hypotheses 3: External resources, management style and perceived efficiency of psychological training mediate the relationship between operational stress and resilience in military gendarmes.

2.2. MEASURES

We used the following four instruments to assess the main concepts of the study.

The *Operational Police Stress Questionnaire (PSQ-OP, McCreary & Thompson, 2006)* was used to measure operational stress. The PSQ-OP consists of 20 items and evaluates stressors associated with the professional activities conducted by military personnel in the previous 6 months. Participants evaluated how certain aspects of their professional life (“*The risk of being injured while working*”, “*Working alone at night*”, “*Fatigue*”, “*Negative comments from the public*”) caused stress in the previous 6 months. To assess this, they used a rating on a scale from 1 (“no stress at all”) to 7 (“a lot of stress”), with 4 indicating an average stress level. McCreary & Thompson reported that the PSQ-OP has a satisfactory level of validity and reliability. The Cronbach's alpha coefficient for this study is 0.913.

The *Connor-Davidson Resilience Scale (CD-RISC, Connor & Davidson, 2003)* was used to measure the resilience of police officers. The instrument consists of 25 items “*Things happen for a reason*”; “*I don't give up even when things seem hopeless/solution*”), each rated on a 5-point Likert scale, from 0 – not at all true, up to 4 – true almost all the time. High scores, obtained by summing the items, indicate increased resilience. The authors reported high internal consistency of the

scale, with a Cronbach's alpha coefficient of .89. The Cronbach Alpha coefficient for this study is 0.754.

Perceived self-efficacy was measured using the *General Self-Efficacy Scale* (GSES, Schwarzer & Jerusalem, 1995). The scale consists of 10 items and measures the general sense of perceived self-efficacy in the face of daily challenges faced by military gendarmes and adaptation after experiencing stressful life events. The total score was obtained by summing the items, a higher level indicating a higher level of perceived self-efficacy. The Cronbach Alpha coefficient for this study is 0.838.

Professional Commitment (Meyer, Allen, & Smith, 1993) was used to measure work engagement. The instrument consists of 18 items, 6 in each of the following scales: AC – affective occupational commitment (“*I really feel as if this organization's problems are my own*”), CC – awareness of the effects of leaving (“*It would be very hard for me to leave my organization right now, even if I wanted to*”), NC – feeling pressured to stay (“*Even if it were to my advantage, I do not feel it would be right to leave my organization now*”). A higher level of the total score indicates a higher work engagement. The Cronbach's Alpha coefficient for this study is 0.714.

The *Multifactor Leadership Questionnaire* (MLQ – 5X, Avolio & Bass, 2004) was used to measure leadership. Participating military members rated how the instrument items corresponded to the behavior of their organization's leader using a scale ranging from 0 – not at all to 5 – frequently, if not always. The instrument is divided into 4 categories. The first three of these focus on leadership through the following scales: transformational scales (“*My leader speaks about the importance of having goals*”; “*My leader acts in a manner that commands respect*”), transactional scales (“*My leader offers guidance/assistance/counseling in exchange for my effort*”; “*My leader clearly displays the rewards of reaching goals*”) and passive-avoidant scales (“*My leader only acts when things go wrong*”; “*My leader avoids making decisions*”). The Cronbach's alpha coefficient of this study is 0.879 for the transformational style, 0.781 for the transactional style, and 0.648 for the passive-avoidant style.

The perceived efficiency of the psychological training was measured using the item “*Please assess how efficient you found the psychological training to be*”. The answers were measured on a Likert scale with a range of 5 points, from 1 – extremely inefficient to 5 – extremely efficient. The total score was determined by adding each score for this item, with a higher score indicating a higher perceived efficiency of the psychological training.

Demographic variables. Each participant filled out questions regarding age, gender, seniority, and status within the organization (officer, noncommissioned officer).

2.3. PROCEDURE

The study procedure and the instruments administered were in full compliance with the Declaration of Helsinki and the University's Code of Ethics. The testing was carried out individually, by applying the tools using the pencil-paper method, in an appropriate environment, without a time limit. Participants completed a consent form and were informed about the purpose of the study, the research design, and the confidentiality of responses. Information related to age, sex, seniority, status held in the organization was collected. Participation was

voluntary and participants could withdraw from the study at any time without prior justification.

The instruments were administered in April 2022 and were not part of an official evaluation of the group of military gendarmes. From the initial set of data, 6 subjects were eliminated because the filling in of the questionnaires was not compliant.

2.4. PARTICIPANTS

The research was conducted on a range of military gendarmes, operative and non-operative, with at least 6 months of experience in the organization. The sample includes N=214 military personnel. The average age of the participants was 38.41 years old, with a standard deviation of SD=9.04. The average seniority of the participants was M=14.48 years, with a standard deviation of SD=7.95. Regarding their status, 9.34% of participants were officers, and 90.65% were non-commissioned officers.

3. RESULTS

3.1. PRELIMINARY ANALYSIS

First, descriptive and correlational statistical analyses were created using the software SPSS 28.0.1.0. The average values, standard deviations, and Pearson correlation coefficients were calculated for the variables of the study.

Second, three longitudinal parallel mediation models were proposed and analyzed using Model 4 (Hayes, 2018) from Process version 4.0 with IBM SPSS 28. A total of 5000 bootstrap samples were used, utilizing confidence intervals based on bootstrapping to estimate confidence intervals of 95% (Hayes, 2017). Confidence intervals that do not include zero indicate significant effects (Hayes & Scharkow, 2013). Mediation analysis was conducted to verify the mediating purpose of internal resources, perceived self-efficacy and occupational commitment, in the relationship between operational stress and resilience, the mediating purpose of external resources, management style and perceived efficiency of psychological training, and the effect of internal and external resources in maintaining the mediating power variables in the relationship between operational stress and resilience.

Operational stress is significantly negatively correlated with the resilience of military gendarmes ($r = -0.66, p < 0.01$), perceived self-efficacy ($r = -0.59, p < 0.01$), occupational commitment ($r = -0.62, p < 0.01$), transformational management style ($r = -0.62, p < 0.01$), transactional management style ($r = -0.52, p < 0.01$), and perceived efficiency of psychological training ($r = -0.56, p < 0.01$) while being significantly positively correlated with passive-avoidant management style ($r = 0.53, p < 0.1$).

Descriptive statistics and correlational analysis are shown in Table no.1.

Table no. 1
Pearson correlations among the variables of the study

		Mean	SD	1	2	3	4	5	6	7	8	9	10
1	Operational stress	38.11	22.77	1									
2	Resilience	93.77	6.97	-0.66**	1								
3	Perceived self-efficacy	37.52	2.81	-0.59**	0.70**	1							
4	Occupational commitment	144.87	27.85	-0.62**	0.65*	0.61**	1						
5	Transformational management style	68.66	13.94	-0.62**	0.58**	0.54**	0.67**	1					
6	Transactional management style	20.23	3.92	-0.52**	0.51**	0.44**	0.50**	0.62**	1				
7	Passive-avoidant management style	5.64	4.38	0.53**	-0.40**	-0.46**	-0.44**	-0.49**	-0.38**	1			
8	Perceived efficiency of psychological training	4.39	0.51	-0.56**	0.57**	0.51**	0.57**	0.52**	0.49**	-0.42**	1		
9	Age	38.41	9.04	0.05	0.00	-0.03	-0.06	-0.02	-0.06	0.12	-0.12	1	
10	Seniority	14.48	7.95	0.02	0.01	-0.04	-0.04	-0.01	-0.01	0.16*	-0.13	0.88**	1

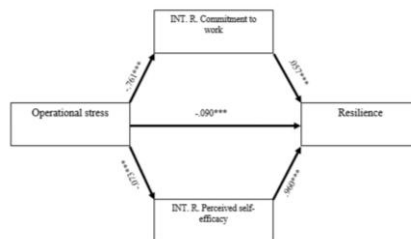
Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

3.2. MEDIATION ANALYSIS

Analyzing parallel mediation in the relationship between operational stress and military personnel resilience, with internal resources acting as mediators

The first parallel mediation model of the study investigated the predictor effect of operational stress on resilience, as well as the mediator effect of military gendarmes' internal resources: occupational commitment and perceived self-efficacy. Operational stress is a significant negative predictor of occupational commitment ($\beta = -0.761$; $p < 0.001$) and perceived self-efficacy ($\beta = -0.073$; $p < 0.001$). The direct effect is statistically significant, indicating that operational stress is a significant negative predictor of military personnel's resilience ($\beta = -0.090$; $p < 0.001$) in a relationship that is partially mediated by occupational commitment and perceived self-efficacy, thus confirming research hypothesis H1.1 (Figure no. 1).

Figure no. 1. The relationship between operational stress and resilience mediated by internal resources



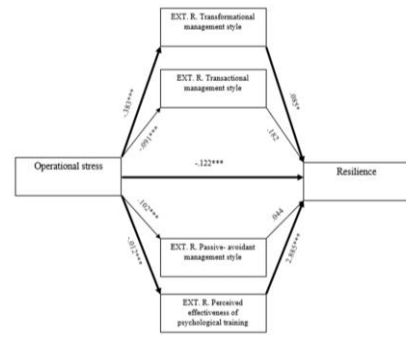
Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Analyzing parallel mediation in the relationship between operational stress and military personnel resilience, with external resources acting as mediators

The second parallel mediation model of the study investigated the predictor effect of operational stress on resilience, as well as the mediator effect of military gendarmes' external resources: management style and perceived efficiency of the psychological training. Operational stress is a significant negative predictor of

transformational management style ($\beta = -0.383$; $p < .001$), transactional management style ($\beta = -.091$; $p < 0.001$), perceived efficiency of the psychological training ($\beta = -.012$; $p < 0.001$) and a significant positive predictor of passive-avoidant management style ($\beta = 0.102$; $p < 0.001$). The direct effect is statistically significant, indicating that operational stress is a significant negative predictor of military personnel's resilience ($\beta = -0.122$; $p < 0.001$) in a relationship that is partially mediated by transformational management style and perceived efficiency of the psychological training, thus confirming research hypothesis H1.2 (Figure no. 2).

Figure no. 2. The relationship between operational stress and resilience mediated by external resources



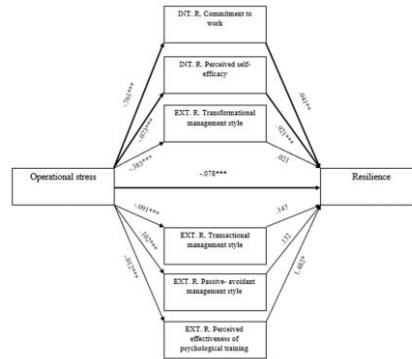
Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Analyzing parallel mediation in the relationship between operational stress and military personnel resilience, with internal and external resources acting as mediators

The third parallel mediation model of the study investigated the predictor effect of operational stress on resilience, as well as the mediator effect of military gendarmes' internal and external resources.

Operational stress is a significant negative predictor of occupational commitment ($\beta = -0.761$; $p < .001$), perceived self-efficacy ($\beta = -.073$; $p < 0.001$), transformational management style ($\beta = -.383$; $p < 0.001$), transactional management style ($\beta = -.091$; $p < 0.001$) and perceived efficiency of psychological training ($\beta = -.012$; $p < .001$) and a significantly positive predictor of passive-avoidant management style ($\beta = 0.102$; $p < .001$). The direct effect is statistically significant, indicating that operational stress is a significant negative predictor of military personnel's resilience ($\beta = -0.078$; $p < .001$) in a relationship that is partially mediated by occupational commitment and perceived self-efficacy, thus confirming research hypothesis H1.3 (Figure no. 3).

Figure no. 3. The relationship between operational stress and resilience mediated by external resources



Note. $*p<0.05$. $**p<0.01$. $***p<0.001$

Table no. 2.
Direct, indirect and total effects of the relationship between organizational stress and resilience

Independent measures (IV)	Dependent measure (DV)	Occupational commitment (M ₁)				IV→ M ₁		M ₁ → DV		Indirect effect		95% CI	
		Total direct effect		Total indirect effect									
		<i>c</i>				<i>a</i>		<i>b</i>		<i>a*b</i>			
OpS		b	SE	b	SE	b	SE	b	SE	b	SE	BootLLCI	BootULCI
		-.090***	.0177	-.114	.015	-.761***	.065	-.057***	.014	-.043	.011	-.066	-.021
	RES												
		Total direct effect		Total indirect effect		IV→ M ₁		M ₁ → DV		Indirect effect		95% CI	
		<i>i</i>				<i>g</i>		<i>h</i>		<i>g*h</i>			
		b	SE	b	SE	b	SE	b	SE	b	SE	BootLLCI	BootULCI
OpS		-.0782***	.019	.126	.017	-.761***	.065	.041*	.016	-.031	.012	-.057	-.006
	RES												
Independent measures (IV)	Dependent measure (DV)	Perceived self-efficacy (M ₂)				IV→ M ₂		M ₂ → DV		Indirect effect		95% CI	
		Total direct effect		Total indirect effect									
		<i>cl</i>				<i>al</i>		<i>bl</i>		<i>al*bl</i>			
OpS		b	SE	b	SE	b	SE	B	SE	b	SE	BootLLCI	BootULCI
		-.090***	.017	-.1143	.015	-.079***	.006	.960***	.141	-.070	.013	-.101	-.046
	RES												
		Total direct effect		Total indirect effect		IV→ M ₂		M ₂ → DV		Indirect effect		95% CI	
		<i>ll</i>				<i>gl</i>		<i>hl</i>		<i>gl*hl</i>			
		b	SE	b	SE	b	SE	b	SE	b	SE	BootLLCI	BootULCI
OpS		-.078***	.019	-.126	.017	-.073***	.006	-.921***	.143	-.067	.013	-.096	-.042
	RES												

Independent measures (IV)	Dependent measure (DV)	Transformational management style (M ₃)											
				Total indirect effect		IV→ M ₃		M ₃ → DV		Indirect effect		95% CI	
		Total direct effect											
		<i>f</i>		<i>d</i>		<i>e</i>		<i>d*e</i>					
OpS		b	SE	b	SE	b	SE	B	SE	b	SE	BootLLCI	BootULCI
		-.122***	.020	-.082	.015	-.383***	.032	.085*	.034	-.032	.014	-.060	-.005
RES													
						IV→ M ₃		M ₃ → DV		Indirect effect		95% CI	
		Total direct effect		Total indirect effect		<i>g2</i>		<i>h2</i>		<i>g2*h2</i>			
OpS		b	SE	b	SE	b	SE	b	SE	b	SE	BootLLCI	BootULCI
		-.0782***	.019	-.126	.017	-.383***	.032	.021	.033	-.008	.012	-.032	.017
RES													
Independent measures (IV)	Dependent measure (DV)	Transactional management style (M ₄)											
				Total indirect effect		IV→ M ₄		M ₄ → DV		Indirect effect		95% CI	
		Total direct effect											
		<i>fl</i>		<i>dl</i>		<i>el</i>		<i>dl*el</i>					
OpS		b	SE	b	SE	b	SE	B	SE	b	SE	BootLLCI	BootULCI
		-1.226***	.020	-.082	.015	-.091***	.010	.182	.112	-.016	.011	-.039	.004
RES													
						IV→ M ₁		M ₁ → DV		Indirect effect		95% CI	
		Total direct effect		Total indirect effect		<i>g3</i>		<i>h3</i>		<i>g3*h3</i>			
		<i>i3</i>											

		b	SE	b	SE	b	SE	b	SE	b	SE	BootLLCI	BootULCI
OpS		-.0782***	.019	-.126	.017	-.091***	.010	.147	.099	-.013	.009	-.031	.004
		RES											
Independent measures (IV)	Dependent measure (DV)	Passive-avoidant management style (M ₅)											
				Total indirect effect		IV→ M ₅		M ₅ → DV		Indirect effect		95% CI	
		Total direct effect											
		<i>f</i> ²				<i>d</i> ²		<i>e</i> ²		<i>d</i> ² * <i>e</i> ²			
		b	SE	b	SE	b	SE	B	SE	b	SE	BootLLCI	BootULCI
OpS		-.1226***	.020	-.082	-.015	.102***	.011	.044	.092	.044	.088	-.012	.022
		RES											
						IV→ M ₁		M ₁ → DV		Indirect effect		95% CI	
		Total direct effect		Total indirect effect									
		<i>i</i> ⁴				<i>g</i> ⁴		<i>h</i> ⁴		<i>g</i> ⁴ * <i>h</i> ⁴			
		b	SE	b	SE	b	SE	b	SE	b	SE	BootLLCI	BootULCI
OpS		-.078***	.019	-.126	.017	.102***	.011	.132	.082	.013	.008	-.004	.031
		RES											

3. DISCUSSION

This study investigated the relationship between operational stress and resilience and some of its explanatory mechanisms using a sample of military gendarmes from southeastern Europe. To clarify the direction and level of association between variables, the study introduces three parallel mediation models: the first investigates the relationship between operational stress and resilience, mediated by internal resources of military gendarmes; the second model analyzes the relationship between operational stress and resilience in a relationship mediated by external resources; and the third model, in order to establish the resources that maintain their mediating power, investigates the relationship between operational stress and resilience, mediated by both internal and external resources.

Operational stress and resilience

The study proves that a higher level of operational stress is associated with a lower level of resilience. The research shows that those in the military who report a higher level of operational stress manifest a lower level of resilience in comparison to those who are not affected by missions-specific stress. Adversity reduces psychological resilience as well as the ability to recover from emotionally negative experiences (Tugade et al., 2004) and to be efficient when facing military-specific intense and constant stressors. Acute stress negatively influences resilience, which no longer manages to prevent the deterioration of physical and mental health (Nindl et al., 2018).

The response to the severity and chronicity of stressors exposure can be explained through a dose-response gradient because the higher the exposure/the more intense the adversity, the weaker the adaptative function manifests itself in those exposed (Masten & Wright, 2010). Constant exposure to stressors can improve and stimulate neuronal connections, but it can also lead to a loss of efficiency for those not in use (Southwick & Charney, 2012). If military gendarmes are constantly exposed to adversity and stress, they will become more efficient in the detection of certain stress factors. Being trained to respond easily to certain stressors, they will need additional effort to activate resilience resources when facing operational stress caused by the necessity to provide public order and safety in an unpredictable, ever-changing society, which requires various difficult work duties.

The results can be explained in reference to the operative type of the military unit in which the study was undertaken. A large variety of missions, concerning public order or anti-terrorist intervention, intense tasks that involve confrontation with street fights or interventions, and working under time pressure at odd hours and in adverse conditions, all put pressure on the ability of military gendarmes to maintain and develop resilience. Military gendarmes are in a constant state of alert

and must respond efficiently to the most intense operative demands, which reduces their ability to maintain a base level of resilience. The level of resilience in military gendarmes is a result of a complex interaction between biological, psychological, and environmental factors (Yao *et al.*, 2019), and it can be affected by the intensity of the experienced stressor. Events that cause very high stress levels can temporarily overpower coping ability and cause damage (Ord *et al.*, 2020). Low-stress environments can have a positive impact on resilience, which can be restrained in high-stress situations (Vanderbilt-Adriance & Shaw, 2008). The pile-up of stress leads to a decrease in resilience (Betacour *et al.*, 2010) for military gendarmes.

The mediating role of internal resources

The results of this study prove the dynamism of resilience, a variable influenced by the complex interaction between operational stress factors and the internal and external resources of the military gendarmes. When military gendarmes have access to internal resources, their use can partially explain the relationship between operational stress and resilience.

Perceived self-efficacy mediates the relationship between operational stress and resilience of military gendarmes. The result is in accordance with previous research that mentioned that persons with a high level of perceived self-efficacy have positive expectations of the future (Lyubomirsky, 2001) and more control over their thoughts, feelings, and actions (Diehl *et al.*, 2008), thus facilitating the development of resilience.

The present research demonstrates the significant negative association between operational stress and the perceived self-efficacy of military gendarmes. Military gendarmes with a higher level of perceived self-efficacy are less affected by operational stress factors in comparison with those with a lower level. The results are confirmed by previous research that mentioned that people with a higher level of perceived self-efficacy are more likely to believe they can successfully fulfill their work tasks despite stressors (Jex *et al.*, 2001). Military gendarmes with a higher level of self-efficacy believe in their abilities, think positively about their tasks, have trust in their capacity to overcome challenges, adapt, are flexible when facing stressors (Bandura *et al.*, 2001), are convinced they can control their thoughts and are more likely to persevere in their efforts compared to those who feel inefficient (Ozer & Bandura, 1990). Instead, military gendarmes with a lower level of self-efficacy have the feeling that they lack abilities to face stressors, finding themselves feeling threatened or pressured and focusing more on their own oversights.

This study proves that self-efficacy leads to an increase in resilience for military gendarmes. Feeling in control and having trust in one's ability to overcome difficulties, specific to self-efficacy (Benight & Bandura, 2004), allow military gendarmes to form a proactive environmental response, essential to resilience (Prilleltensky *et al.*, 2001). The results of this study can be supported by Flach's

resilience theory (1989), which suggests that perceived self-efficacy is one of the psychological aspects that allows individuals to successfully handle change, and by Lightsey's theory (2006), which claims that an individual's self-efficacy is essential for their level of resilience.

Occupational commitment acts as a mediator in the relationship between operational stress and resilience. Military gendarmes face many social, psychological, and professional challenges that can affect their occupational commitment level, influencing personal development and professional efficiency. The ability of officers and noncommissioned officers to maintain an optimal level of occupational commitment is essential not only for their own safety during missions but also for the safety of citizens.

This study proves that operational stress is significantly negatively correlated with occupational commitment. The results clarify the relationship between stress and occupational commitment in military gendarmes. Most studies prove that, in various work environments, stress is negatively correlated with occupational commitment (Amin *et al.*, 2018). Stress diminishes vigor, dedication, the ability to manage the resources needed for workplace engagement, enthusiasm and energy (Miranda *et al.*, 2020).

Increased commitment ensures an increase in resilience for military gendarmes. As work commitment increases, the gendarme becomes more involved, more aware of the importance of their work, and more determined to reach professional objectives, which in turn increases resilience (Salo, 2009). The gendarme with a higher level of occupational commitment has a positive approach in the work environment, is more motivated, focused on the advantages of being in difficult situations and shares this positive view with others, puts in extra effort for the benefit of the organization and adapts easily to the changing context (Tugade *et al.*, 2004). Occupational commitment offers the affective, cognitive, and emotional resources needed for recovery and return to a balanced state, influencing the increased resilience (Youssef & Luthans, 2007). In conclusion, based on all mentioned aspects, occupational commitment represents an internal resource that ensures a high level of resilience for military gendarmes when facing operational stressors.

The mediator role of external resources

By separately investigating the purpose of external resources, the mediator purpose in the relationship between operational stress and resilience stands out. *The perceived efficiency of psychological training* is an external resource that acts as a mediator in the relationship between operational stress and resilience for military gendarmes. Military personnel carry out complex and stressful tasks that can have negative cognitive or emotional effects even on those most well prepared (Stetz *et al.*, 2007). Stress can reduce operational efficiency and performance (Kavanagh, 2005) and cause psychological disorders such as exhaustion, reduced performance, or health problems, which are very costly for the individual (Levi, 2000) and the

organization (Goetzel *et al.*, 2004). In this context, this study proves that a positive perception of psychological training ensures a decrease in operational stress and an increase in resilience for military gendarmes.

This study proves that military gendarmes with a positive view of psychological training feel less stress than those who do not see the benefit of the activity. The results are in accordance with previous research that mentioned that by training stress adaptation mechanisms, its negative effects are reduced (Doran *et al.*, 2006). Psychological training aids in the development of psychological, emotional, and individual factors such as intelligence, self-esteem, motivation, problem-solving or humor (Cicchetti, 2013), as well as social factors (O'Dougherty Wright *et al.*, 2013), such as healthy interpersonal relationships (Masten, 2014); adaptability to the environment is also increased, ensuring a higher level of resilience when facing stressors (Masten & Powell, 2003).

A positive perception of the psychological training activity ensures an increase in resilience for military gendarmes. Military gendarmes who acquire strategies to handle risky missions, intervention methods, effective communication, and strengthen their values such as fellowship, manage to face operational threats better (Sigad, 2020).

Although being overloaded in the workplace, lack of control, job insecurity, communication problems or the imbalance between personal and professional life (Faragher *et al.*, 2004) can cause significant amounts of stress, psychological training acts as an external resource that ensures the increase of resilience.

Transformational management style is an external resource for the military gendarme, acting as a mediator in the relationship between operational stress and resilience. This study fills the gap regarding the efficiency of management styles specific to military gendarme organizations by proving that operational stress has a negative effect on transformational leadership. Simultaneously, the transformational leadership style ensures an increase in resilience for military gendarmes.

The transformational management style is significantly negatively associated with operational stress (Amirkhani & Kazemi, 2016). When subordinates perceive leadership as transformational, they self-identify more, internalizing the leader's values (Yang *et al.*, 2011), such as toughness, strength and resilience. Transformational leaders increase the military's resilience to stress (Jayasingam, 2019), both by developing efficient stress management strategies and by strengthening friendly interpersonal organizational relationships (Jayasingam, 2019).

The transformational management style of the military leader develops high resistance in subordinates facing operational stress factors by reformulating negative events (Rowold & Schlotz, 2009), promoting quality and competence, efficiency and efficacy (Dixon *et al.*, 2017), increasing commitment for the military unit, building trust, maintaining courage and encouraging subordinates to

fight for each other (Kohan *et al.*, 2018). Bass (1990) noted that transformational leadership increases resilience to adversity by turning crises into development opportunities and by providing creative, adaptable, and careful solutions rather than maladaptive or defensive solutions.

Transformational military leaders have superior communication skills, theoretical knowledge, persuasive skills, and a charismatic attitude through which they try to inspire their subordinates, obtaining belief and respect. They clarify the group's mission, and they are characterized by idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Avolio, 1994). Idealized influence transforms the military leader into a strong model whose behavior is in accordance with ethical norms (Gooty *et al.*, 2009). The leader's inspirational motivation connects the gendarmes to the values and beliefs of the military organization and motivates them to achieve personal and organizational objectives. In a military environment, the transformational leader has the ability to promote innovation and creativity through intellectual stimulation (Bass & Avolio, 1994). In addition, they are interested in the needs, values, and individual preferences of military personnel to make the most appropriate decisions (Bass & Avolio, 1994).

The mediator role of internal and external resources

When military gendarmes have access to both resource categories, only the internal ones partially explain the previously mentioned relationship. Perceived self-efficacy and occupational commitment are proximal variables – more accessible, easy to activate, and use in risk missions, in comparison to external, distal variables. In accordance with previous research, resilience increases when internal resources are activated to help in facing work demands (Back *et al.*, 2016). The role of internal resources as mediators was proven: the perceived self-efficacy (Kamphuis & Delajaih, 2014) and occupational commitment (Glazer & Kruse, 2008) diminish the impact of operational stress on resilience in military personnel (Boermans *et al.*, 2012).

4. LIMITATIONS AND FUTURE DIRECTIONS

Beyond its advantages, this study has some limits. First, the research was conducted on a sample of gendarmes from a single military unit, and generalizing these results nationally must be done with caution. However, the data cannot be generalized for other structures in the field of public order and security. Second, stress assessment could be another limitation. The study was based on calculating the average operational stress, but there is likely to be considerable variation in stress due to different missions. Further research could investigate responses to high stress induced by events that are simultaneous or consecutive to the dynamic stress processes. Third, the conclusions regarding causality in the relationship between stress and resilience, as well as those regarding mediator effects, are

limited by the manner of data collection. The study was based on a cross-sectional collection of data provided by self-report instruments, which could increase the global error variance. To solve the issue of self-report, future research could consider including data from other sources (co-workers, superiors), as well as utilizing other investigation methods (observation). Further research can also be oriented towards the development of longitudinal or experimental studies to investigate the stability of resilience over time, the variables that maintain their role as internal/external resources, and the causalities in the relationships between them. Future longitudinal studies are essential for a better understanding of how the process may change over time, under the influence of individual or environmental variables, furthering the understanding of mental health following exposure to negative experiences.

5. CONCLUSION

The results of this research show the complexity of the relationship between operational stress and resilience in military gendarmes, as well as the resources that can explain it. The study indicated that operational stress significantly negatively predicts the resilience in military gendarme, a relationship separately mediated by military gendarmes' internal, and external resources. Perceived self-efficacy and occupational commitment are unique mediators of the relationship between operational stress and resiliences, as internal resources that ensure growth and development after contact with negative-impact factors. The transformational management style and the perceived efficiency of psychological training are unique mediators in this relationship, acting as external resources that ensure better functionality within the military organization. When military gendarmes have access to both resource categories, only the internal ones partially explain the previously mentioned relationship. Focusing on the military gendarmes' available resources for increasing resilience is of major practical importance and represents the starting point for the development of strategies meant to reduce negative consequences associated with professional activity and to stimulate self-development and professional growth.

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