Occupational stress and work engagement among military police officers

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> Abstract This paper investigates the levels of occupational stress and work engagement among military police officers. This cross-sectional, descriptive, and analytical study was conducted with 268 police officers from the 3rd Military Police Battalion of Paraná state. We observed significant levels of occupational stress in 125 (46.7%) police officers. The main stressors were lack of career growth prospects $(3.7; \pm 1.3)$; inadequate training $(3.4; \pm 1.2)$; discrimination/favoritism in the work environment $(3.1; \pm 1.4)$; long working hours (3.0; ± 1.4); distribution of tasks (2.7; ± 1.1); control type $(2.7; \pm 1.1)$; gaps in disclosing information about organizational decisions $(2.7; \pm 1.2)$; low valuation (2.7; ± 1.2). Levels of work engagement ranged from 3.8 [medium] to 4.1 [high]. The correlation between occupational stress and work engagement was low for the dimensions of Absorption (r: -.284; p<0.001) and Overall Score (r: -0.393; p<0.001) and moderate for the dimensions Vigor (r: -0.422; p<0.001) and Dedication *(r: -0.414; p<0.001). We concluded that an impor*tant number of police officers had shown occupational stress. However, they displayed good levels of work engagement and are enthusiastic, inspired, and proud of their work.

> **Key word** Occupational stress, Work engagement, Police, Military personnel

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Introduction

Providing an appropriate security service to the population is crucial in implementing police work, primarily due to the advance of crime and violence in the social and community sphere, which is institutionalized and perfected in contemporary Brazilian society. However, the work activities of military police officers are widely associated with illness and impairment of their work capacity. Therefore, their physical and psychological health is strictly related to the exercise of work activity and is becoming a relevant problem for occupational health currently¹⁻⁴.

The demand for answers from the security service provided to society has organizational and political impacts, as military police officers' environment and work process have important implications for the health, well-being, and productivity of these professionals, directly reflecting on the quality and resolvability of the security service. In this context, the violation of the policemen's right to decent working conditions represents a form of violence in the work environment, which can harm the commitment and professional performance of these workers^{1-3,5}.

When satisfied and professionally fulfilled, police officers generate more significant support for coworkers and superiors, resulting in even higher levels of well-being and motivation. This satisfaction with work comprises engagement at work, a positive affective, cognitive state vis-àvis their work, which involves commitment and alignment of these professionals with the environment and labor activity⁶⁻⁸.

According to the literature, work resources, such as learning opportunities, good ambiance, and support, play a fundamental role in the motivational well-being of workers, satisfying their psychological needs for competence and autonomy. However, if professionals who are satisfied and involved with their work tend to view the labor activity as challenging and fun, with energy, willingness, and motivation, when psychologically frustrated, they can display exhaustion, discouragement, and lack of motivation, which generate a loss of energy resources and affect labor production, culminating in the development of pathologies associated with mental exhaustion⁶.

In this case, the worker's weariness arising from the imbalance in their relationship with the work environment is classified as occupational stress. The qualitative and quantitative overload of functions stands out among the causes of occupational stress, which makes the work environment threatening, compromising workers' productivity and preventing them from achieving personal and professional self-realization⁹.

In the state of São Paulo, a study with 506 military police officers showed that, although professionals claim to be satisfied with their health, their quality of life is compromised in aspects related to the environment. The data uncover a significant association between high stress levels and poor quality of life, revealing the need for policies that promote coping mechanisms to improve the quality of life of this public, directly reflecting on the public safety service¹⁰.

Therefore, given the relevance of the work of military police officers for society, the importance of identifying occupational stress factors related to the work process and its implications for the health, well-being, and job satisfaction of these professionals is notorious. Given the above, this study aims to investigate the levels of occupational stress and engagement in work among military police officers.

Methods

This cross-sectional, descriptive, and analytical study was conducted with police officers from the 3rd Military Police Battalion of Paraná (3° BPM/PR) in 2018. The 3rd BPM/PR belongs to the 5th Regional Military Police Command of the State and serves a population of approximately 260 thousand inhabitants, distributed in 16 municipalities in the southwestern micro-region of Paraná¹¹. Headquartered in Pato Branco, the 3rd BPM/PR has 312 police officers who carry out policing in urban and rural areas, traffic inspection, application of sniffer dogs, presence at shows and events, and have a structure for intervention in civil disturbances and rebellions¹¹.

The study population consisted of military police officers of the 3rd BPM/PR who agreed to participate in the study after being invited. Professionals who were on leave or removed from work activities due to health problems, leave, or any other reason during the period of data collection were excluded.

Three instruments were used for data collection. One was with information on the sociodemographic and professional profile of police officers (gender, age group, marital status, education, position, service seniority, working hours, work shift, physical activity, and if held responsible for disciplinary transgressions); the Work Stress Scale (EET), validated by Paschoal and Tamayo¹²; and the Brazilian version of the Utrecht Work Engagement Scale (UWES), validated by Vazquez *et al.*¹³.

The EET consists of sociodemographic data and 23 negative responses, with a five-point scale, ranging from "strongly disagree" to "strongly agree". Its indicators were developed from the analysis of the literature on psychosocial, organizational stressors, and psychological reactions to occupational stress. The scale has satisfactory psychometric characteristics and can contribute to research on the subject and diagnose the organizational environment. This organizational diagnostic tool has been subjected to psychometric tests and requirements¹².

The UWES is composed of 17 items that assess the individual's level of work satisfaction. The scale assesses the three constituent aspects of work engagement (dedication, absorption, and vigor) and has been validated in several countries¹³.

The data obtained were stored in a database using a Microsoft Excel® spreadsheet and analyzed with the Statistical Package for Social Sciences (SPSS), version 23.0. Sociodemographic and professional variables were used to describe the profile of military police officers.

Occupational stress was evaluated by calculating a mean score obtained by the officers, identifying the most common stressors according to the officers' perception. Then, a descriptive analysis of sociodemographic and professional variables was conducted, according to the presence or absence of occupational stress. EET indicators range from one to five, and the higher the mean, the greater the stress. Indicators of significant stress levels are mean values equal to or greater than 2.5.

The scores of the work engagement dimensions were calculated per the statistical model proposed in the UWES Preliminary Manual – Utrecht Work Engagement Scale, showing the mean and standard deviation for each UWES dimension. The Vigor is calculated by the arithmetic mean of the answers to questions 1, 4, 8, 12, 15, and 17 of the UWES; Dedication is the arithmetic mean of the answers to questions 2, 5, 7, 10, and 13; and Absorption consists of the arithmetic mean of the answers to questions 3, 6, 9, 11, 14, and 16. The overall score corresponds to the arithmetic mean of the answers to all the questions on the scale¹⁴.

After calculating the scores, the values obtained were interpreted according to the decoding of the UWES Preliminary Manual, as follows: 0 to 0.99 = Very Low; 1 to 1.99 = Low; 2 to 3.99 = Medium; 4 to 4.99 = High; 5 to 6 = Very High¹⁴.

The Cronbach's Alpha internal consistency indicator was used to verify the reliability of the construct measures. The T-test was used for two means and ANOVA for three or more means to verify the difference between the mean scores of the UWES dimensions and the sociodemographic and professional characteristics of the military police officers.

Finally, a correlation analysis was performed between occupational stress and the UWES dimensions (Dedication, Absorption, Vigor, and Overall Score), using the Pearson correlation test (r) and considering weak correlation for "r" values up to 0.30, moderate for values between 0.40 and 0.60, and strong for values higher than 0.70. A 95% (p≤0.05) significance level was adopted for all calculations.

The Research Ethics Committee approved the study.

Results

A total of 268 military police officers participated, and 84.7% were men, aged 31-40 years (46.6%), with incomplete higher education (45.1%) and married (67.6%). Most were soldiers (82.8%), had operational functions (70.1%), and worked in scheduled shifts (72.4%), with 51.1% working 24x48h shifts. Regarding seniority in the police, 54.5% of police officers worked 3-10 years. Approximately 90.6% did not exercise any other paid activity, 25.5% did not engage in physical activity, 48.5% had already committed a disciplinary transgression, and 33.6% reported problems that compromised their quality of life. (Table 1)

Police officers showed significant levels of occupational stress (46.7%), and 86.4% were male, 46.4% were 31-40 years, 39.2% with incomplete higher education, 66.4% were married, 83.9% were soldiers, 71.2% performed operational functions, 74.4% worked scheduled shifts, 49.6% worked 12x24h or 12x48h shifts, 55.2% had been working in the Military Police 3-10 years, 89.6% had no other paid activity, 5.2% engaged in physical activity, and 53.6% had committed a disciplinary transgression.

Table 2 shows that the stressful aspects, according to the perception of the military police officers, were: [Q16] lack of career growth prospects $(3.7;\pm1.3)$; [Q13] inadequate professional training $(3.4;\pm1.2)$; [Q12] discrimination/ Santos FB et al.

Variables	Categories	n	%
Gender	Male	227	84.7
	Female	41	15.3
Age group	21-30	111	41.4
(years)	31-40	125	46.6
	41-50	32	11.9
Schooling	High School	73	27.2
	Incomplete Higher Education	121	45.1
	Higher Education	71	26.5
	Did not answer	3	1.
Marital status	Married	181	67.0
	Single	70	26.
	Separated	14	5.2
	Widower	3	1.
Rank	Soldier	221	82.8
	Corporal	15	5.0
	Sergeant	13	4.9
	Second Lieutenant	2	0.7
	Aspiring Officer	5	1.9
	First Lieutenant	7	2.0
	Captain	3	1.
	Major	1	0.4
Function	Administrative	80	29.9
	Operational	188	70.
Working day	Six hours	8	3.0
	Eight hours	80	29.9
	24 x 48 hours	137	51.
	Other *	42	15.2
	Did not answer	1	0.4
Work shifts	Morning and Afternoon	62	23.
	Afternoon and Night	11	4.
	Shifts **	194	72.4
	Did not answer	1	0.4
Seniority	≤ 3	59	22.0
(years)	3-10	146	54.5
	10-20	33	12.3
	> 20	30	11.2
Other paid	Yes	25	9.4
work	No	242	90.0
Physical	Yes	199	74.5
activity	No	68	25.5
Disciplinary	Yes	130	48.5
Transgression	No	138	51.5
Problem	Yes	90	33.0
compromising	No	176	65.7
the QoL	Did not answer	2	0.7

Table 1. Sociodemographic and professional characteristics of police officers from the 3rd Military Police Battalion in the state of Paraná, Brazil, 2018.

* 12x24 or 12x48 hours working day. ** Work shift: 12x24 - 12x48 or 24x48 hours.

Source: Authors elaboration.

favoritism in the work environment $(3.1;\pm1.4)$; [Q10] prolonged working hours $(3.0;\pm1.4)$; [Q1] form of task distribution $(2.7;\pm1.1)$; [Q2] control type $(2.7;\pm1.1)$; [Q5] deficiency in disclosing information about organizational decisions $(2.7;\pm1.2)$; [Q15] low valuation by superiors $(2.7;\pm1.2)$; [Q3] lack of autonomy in performing the work $(2.6;\pm1.1)$.

Work engagement levels ranged from 3.8 [medium] to 4.1 [high]. Cronbach's Alpha Coefficient values ranged from 0.790 to 0.940, showing reliable results (Table 3).

There were no statistically significant differences between the mean scores of the UWES dimensions and the sociodemographic and professional variables of the military police officers. The correlation between work engagement and occupational stress was negative and statistically significant, as the increase in occupational stress decreases the work engagement levels (Table 4). A weak correlation was observed between occupational stress and dimensions Absorption (r: -0.284; p<0.001) and Overall Score (r: -0.393; p<0.001) and moderate with Vigor (r: -0.422; p<0.001) and Dedication (r: -0.414; p<0.001).

Discussion

Military police officers from the 3rd BPM/PR have a sociodemographic and professional profile similar to that reported by other studies with Brazilian police officers^{10,15}. The predominance of scheduled shift work is typical among police officers and corroborates the literature^{10,16-17}. The intense and risky activity of the military police, linked to long working hours in shifts, provides a natural predisposition to bodily pain, such as low back pain, due to the long time spent in an upright position, use of equipment such as a ballistic vest and trim belt, and to physical and emotional stress. In this sense, excessive working hours can escalate the stress situation and lead to health problems that become chronic and compromise the quality of life of these professionals^{10,16-18}.

The percentage of military police officers with significant levels of occupational stress is consistent with other studies and, possibly, a consequence of the work environment surrounded by conflicts, which lead to physical and mental exposure of police officers, given the most diverse occurrences. Police officers constantly face imminent risks that contribute to the emergence of stress during the working day, impacting their **Table 2.** Evaluation of EET items, according to the perception of the officers of the 3rd Military Police Battalion in the state of Paraná, Brazil, 2018.

Itens da EET	Média (±dp)
Q1 - The way tasks are distributed in my area has made me nervous	2.7 (±1.1)
Q2 - The kind of control that exists in my work annoys me	2.7 (±1.1)
Q3 - The lack of autonomy in implementing my work has been exhausting	2.6 (±1.1)
Q4 - I have been uncomfortable with my superior's lack of confidence in my work	2.2 (±1.2)
Q5 - I am irritated by the lack of disclosure of information about organizational decisions	2.7 (±1.2)
Q6 - I feel uncomfortable with the lack of information about my tasks at work.	2.4 (±1.1)
Q7 - The lack of communication between my coworkers and me makes me angry	2.1 (±1.0)
Q8 - I feel annoyed that my superior mistreats me in front of coworkers	2.3 (±1.4)
Q9 - I feel uncomfortable having to perform tasks that exceed my capacity	2.4 (±1.2)
Q10 - I get in a bad mood for having to work for many hours at a time	3.0 (±1.4)
Q11 - I feel uncomfortable with the communication between my superior and me	2.3 (±1.2)
Q12 - I get irritated with discrimination/favoritism in my work environment	3.1 (±1.4)
Q13 - I have been uncomfortable with the deficient professional training	3.4 (±1.2)
Q14 - I get in a bad mood because I feel isolated in the organization	2.1 (±1.1)
Q15 - I get annoyed at being undervalued by my superiors	2.7 (±1.2)
Q16 - The few prospects for career growth have left me anguished	3.7 (±1.3)
Q17 - I have been bothered by working on tasks below my skill level	2.4 (±1.2)
Q18 - The competition in my work environment has put me in a bad mood	2.0 (±1.0)
Q19 - The lack of understanding of what my responsibilities are in this work has caused irritation	2.3 (±1.1)
Q20 - I have been nervous about my superior giving me contradictory orders	2.2 (±1.1)
Q21 - I feel irritated that my superior is covering up my well-done job in front of other people	2.2 (±1.1)
Q22 - Insufficient time to carry out my workload makes me nervous	2.2 (±1.1)
Q23 - I am annoyed that my superior prevents me from taking on significant responsibilities.	2.1 (±1.0)
sd: standard deviation.	

Source: Authors elaboration.

UWES Dimensions	Cronbach's Alpha	Md	Mean±SD	95% CI	Interpretation	p-value*
Vigor	0.877	4.0	3.8±1.2	3.6 - 3.9	Medium	< 0.001
Dedication	0.893	4.0	4.1±1.3	3.9 - 4.2	High	
Absorption	0.790	3.0	3.3±1.2	3.2 - 3.5	Medium	
Overall score	0.940	4.0	3.7±1.2	3.6 - 3.8	Medium	

Table 3. Levels of engagement in the work of police officers from the 3rd Military Police Battalion in the state of Paraná, Brazil, 2018.

Min: minimum. Max: maximum. Md: median. SD: Standard Deviation. 95% CI: 95% confidence interval. * T-test.

Source: Authors elaboration.

health, such as excessive working hours, low pay, insufficient logistical support, and lack of motivation. In this context, the military police officer's work process can trigger frustration, insecurity, conflicts, and dissatisfaction, directly related to occupational stress¹⁹⁻²⁰.

Categories	Occupational Stress	P-value	
Vigor	-0.422*	< 0.001	
Dedication	-0.414**	< 0.001	
Absorption	-0.284**	< 0.001	
Overall score	-0.393**	< 0.001	

Table 4. Correlations between work engagement and occupational stress among officers of the 3rd Military Police Battalion in the state of Paraná, Brazil, 2018.

* Significant correlation at the 99% level (p<0.01).

Source: Authors elaboration.

In the meantime, the consequences of occupational stress reach individual, group, and organizational levels. Declining efficiency, voluntary work overload, emotional explosion, high level of tension, frustration, omnipotence, and aggravation of illnesses are seen at the individual level. At the group level, hostile behaviors, useless arguments, little contribution to work, not sharing problems, and a high level of insecurity arise. However, at the organizational level, we see losses such as constant delays in meeting deadlines, absenteeism, high employee turnover, low effort level, and impoverished bonds^{19,21}.

The predominance of occupational stress among soldiers who performed the operational tasks shows that demands for operational services are more intense and exhausting, especially for low-ranking professionals. The literature indicates that police officers working in administrative duties perform day shifts and, sporadically, extra shifts. On the other hand, the operational police officers perform external functions, work directly with society ostensibly, and uphold public order, with high physical and mental exposure. The risks inherent to the operational performance of police officers materialize, above all, in armed confrontations, in which there is high exposure and possible occurrence of fatal events10,22-23.

The fact that more than half of police officers with 3-10 years of experience in the corporation show significant occupational stress levels may be associated with the high strictness imposed on military training and conduct. Literature sustains that military police officers must fulfill their duty, denoting an irreproachable moral and professional behavior, and keep a social life with unblemished behavior²³ outside the disciplinary regiment. Likewise, the pressure for compliance with the values and ethical duties of the military, whose insubordination is a crime subject to severe punishment, is a factor that generates wear and stress on police officers and may explain the relationship of the high percentage of professionals charged with disciplinary transgressions with occupational stress³⁰.

The perception of military police officers regarding the lack of career growth prospects as a triggering factor for occupational stress is corroborated by a general survey on police work in Brazil, which showed that the police career is not as attractive, due to the lack of prospects for growth within corporations, besides loss of career identity, death risks, sense of exploitation, and abandonment by the institution. Such meanings took on negative references and were associated with notions of malaise at work, which can favor occupational stress²³.

Another stressing aspect mentioned was the deficient professional qualification, whose implementation is essential for police action. Military police officers must constantly be qualified to be aware of the exact moment to take action and guarantee society's security to guarantee excellence in their professional work, mainly so that individual and collective rights can be respected²⁴.

Issues of discrimination and favoritism in the workplace are associated with the antisocial behavior of individuals in organizations to harm colleagues and the institution, which confirms that this aspect is considered a stressor by the military police, pointing to the need to intervene in this situation²¹.

Another stressful aspect was the long working hours the military police officers were subjected to. Shift work can affect sleep quality, and its deprivation can harm the health of professionals. Therefore, long hours and shift work bring complications to the biological and circadian cycle. Also, the high level of attention and alert required from the police, especially during night work or on long journeys, increases the likelihood of car accidents caused by tactical monitoring in dark environments and armed confrontation, which can claim lives²⁵⁻²⁶.

Regarding the distribution of tasks, identified as an essential stressor, it is noteworthy that many cause tension and contradictions in police work, generating a lack of motivation to continue in the career, as a result of interventions that do not represent the public function of the police and often only serve to meet the particular interests of hierarchical superiors²³. This understanding considers another stressing aspect pointed out by Paraná police officers, which is the type of control in their work, as excessive control in the performance of duties leads to alienation and, consequent irritability, enhancing occupational stress²⁷.

The poor dissemination of information related to organizational decisions generates irritability in police officers, showing that the communication problem is very much alive among the studied professionals and the corporation. Internal institutional communication is crucial for knowledge management in organizations, especially strategically, as good communication improves the corporate environment, positively affecting the external environment²⁸. Also, the low valuation by superiors related to the lack of disclosure of information, especially organizational decisions, directly affects the daily work, generating stress and professional wear²⁹.

While it is routine for military police officers to deal with these asymmetrical power relationships, the rigid rank model becomes harmful as it contributes to the humiliation and devaluation of the professionals, such as the using the rank to embarrass and oppress subordinates, which strengthens low self-esteem and professional devaluation³⁰.

Opposing the stressful aspects analyzed, the positive relationship of military police officers with work (work engagement) was very good, demonstrating that these professionals have high energy levels and identify with work. The observed results corroborate national studies with other professionals, such as nurses and PHC workers, multidisciplinary health residents, health professionals enrolled in professional improvement programs³¹⁻³⁶.

The variations between medium and high values work engagement levels of military police officers reinforce that this is a phenomenon related to their work environment, influenced by individual, organizational and work-specific characteristics³⁴.

The average level of Vigor of police officers can reduce occupational stress. A recent study with military police officers indicated a potential positive impact of resilience in reducing occupational stress, predominantly female professionals³⁷. The high level of Dedication shows that the military police are enthusiastic and identify with the work. According to the literature, the work environment should provide social support among professionals for workers to show high work engagement levels. Likewise, satisfactory levels of Dedication among workers will depend on the managers' support capacity^{35,38}.

A study on work engagement and burnout carried out in the Netherlands with more than two thousand police officers concluded that professionals who were part of teams highly involved in work activities had higher Vigor, Dedication, and Absorption levels. These results reinforce the advantages of healthy work environments for the good performance of duties³⁹.

The mean level of Absorption portrays a good focus and concentration of police officers in carrying out their missions, which is essential for the daily work of these professionals. A study carried out in Bahia showed that police officers had higher levels of Dedication and Absorption than other professionals. This difference may be more significant for the authors when comparing police officers with health professionals, social workers, and guardianship counselors⁴⁰.

However, even with high work engagement levels, police officers can show physical fatigue after work because engagement is associated with satisfaction and pleasure in performing work duties. Even physically tired, police officers find meaning and pleasure in their attributions, which ensures them high engagement levels³⁹⁻⁴⁰.

In this context, corporations should encourage the positive relationship of police officers with work to prevent occupational stress from negatively impacting the work engagement levels of police officers and compromising the progress of the security service, based on the valuation and reward of professionals, adequate working hours, flexibilization of control types, implementation of permanent qualifications, and organizational recognition⁴¹.

However, the implementation of these actions is a challenge for occupational health in the contemporary world. The achievement of relevant impacts for the health of police officers requires their involvement through representative organizations, expanding the power of individual and collective action in negotiating with hierarchical superiors and state governments⁴²⁻⁴³.

Conclusion

The study allowed identifying the factors that trigger occupational stress in military police officers and, by identifying the work engagement levels, it facilitated knowledge about the relationship of these professionals with the work environment. Despite the significant number of police officers with occupational stress, they showed good work engagement levels, especially in the Dedication domain, as they are highly enthusiastic, inspired, and proud of their work. Therefore, the relevance of identifying and intervening in the triggering factors of occupational stress was evidenced, implementing measures that minimize suffering and emotional exhaustion, and encouraging the police to engage in work.

Therefore, this study contributes to implementing strategies that encourage positive aspects and reduce negative factors of police work, based on organizational interventions that improve police officers' health, satisfaction, well-being, and quality of life, positively affecting the safety of the assigned community.

The approach of only one Military Police Battalion is a limitation, as it does not allow generalizing the results to the entire state corporation or other Brazilian regions. Thus, we suggest that further studies be carried out with an expanded sample to ensure comparisons and discussion of regional similarities and differences, expanding knowledge on this relevant topic within the promotion of Occupational Health in contemporary society.

Collaborations

FB Santos, LG Lourenção, and E Vieira contributed to the design and preparation of the project, acquisition, analysis, and interpretation of data, writing, and final approval of the paper. FRG Ximenes Neto, AMN Oliveira, JF Oliveira, MA Borges, and TR Arroyo contributed to the writing and final approval of the paper.

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