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Original Article

Policing, stress and coping: a characterization study with Oporto Portuguese Security Police Officers

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ABSTRACT

Policing is associated with numerous stressors and challenges inherent to the demands of the profession. This study examined levels of perceived stress and psychological counselling-seeking among police officers in Oporto and investigated the contribution of sociodemographic, coping, and emotional experience variables to stress outcomes. An online survey was administered to squads of the Portuguese National Police ($N = 123$), including the PSS-10, ERQ, and RDEES scales. Over one-third of the officers reported elevated stress levels, yet only 16.7 per cent of those above the clinical threshold had sought counselling. Higher perceived stress was significantly associated with greater emotional suppression and broader emotional range, whereas emotional differentiation showed a potential protective effect. No other significant predictors emerged, including cognitive reappraisal or other sociodemographic and occupational factors, such as years of service, rank, and education. Similarly, none of our variables predicted counselling seeking. Emotion-related processes explained substantially more variance in stress than occupational or sociodemographic variables, reinforcing prior research linking suppression coping to poorer mental health outcomes in policing. These findings underscore the relevance of interventions targeting emotional awareness, adaptive coping, and organizational strategies that reduce mental health stigma and structural barriers to help-seeking, particularly among operational officers. Future research should prioritize systemic, multi-level approaches to support well-being within police organizations.

INTRODUCTION

Policing has been repeatedly documented as a hazardous job, including both physical and psychological risks. Some of the consequences of the psychological strain resulting from a high-demand environment are high and chronic levels of stress, burnout, depression, anxiety, post-traumatic stress, and, in some cases, suicide (Queirós et al. 2013; Violanti et al. 2016a; Syed et al. 2020; Craddock and Telesco 2022; Krishnan et al. 2022). It is well documented that the main risk factors affecting police officers' (POs) overall mental health relate to individual, occupational, and organizational experiences (Syed et al. 2020; Queirós et al. 2020a, 2020b; Acquadro Maran et al. 2022; Krishnan et al. 2022). Each of these domains represents a different facet of the officers' daily experiences in interaction with the organizational features and demands of the professional tasks in an unpredictable, constantly changing, and hazardous work environment (Scharf et al. 2001). Further, the psychosocial characteristics of the workers as individuals, namely their relationship with family, community, and other individual characteristics, all contribute to the daily environment that police officers must navigate. Although all levels of risk factors are fundamental to address, this paper will focus specifically on perceived stress levels and coping tendencies in a population of Oporto police officers, concerning specific sociodemographic and occupational–organizational variables limited to education, years of service, and ranking in the police force. Day-to-day measures of incidents and other stressful organizational phenomena commonly experienced by police officers have not been assessed in this study.

General risks and stressors in policing

Previous research consistently highlights a few sociodemographic variables as significant factors in policing experiences, among which gender emerges as a predominant moderation factor for stress, clinical symptoms, and emotional experience. However, the examination of relevant gender differences

remains uneven across national contexts and is often limited by the structural underrepresentation of women in police forces. Female officers tend to report higher depressive and anxiety symptoms and lower perceived levels of support from supervisors, while male officers experience is more often associated with problematic drinking, externalized coping styles, and the perception of overtime and secondary jobs as major stressors (Violanti et al. 2016b, 2017; Syed et al. 2020; Krishnan et al. 2022). According to a review conducted by Violanti and colleagues (2017), police duty constraints (e.g. overtime hours, shift work) increase stress levels, mental ill-health issues, and difficulties managing family and other close relationships, especially for female and younger officers. Lastly, although educational level is not typically regarded as a policing-specific risk factor, it has been shown to influence well-being and mental health constructs, such as coping and stigma (Halpern-Manners et al. 2016; Zajacova and Lawrence 2018), suggesting its potential relevance as a complementary factor in understanding stress and resilience among officers.

Among some of the main occupational stressors, namely exposure to critical incidents, work-related stress, work–family conflict, and negative perceptions related to workplace hazards (Violanti et al. 2016a, 2016b; Syed et al. 2020; Kyron et al. 2021), years of service have been identified, although inconsistently, as an underlying factor influencing coping styles, stress levels, and resilience in POs (Lane et al. 2022; Traynor et al. 2024). While some officers may have developed various strategies to manage work-related stressors effectively, the cumulative exposure to critical incidents tends to have negative implications for POs' general health and well-being, including psychopathological conditions and lower perceived health (Violanti et al. 2017; Costa et al. 2019; Syed et al. 2020; Queirós et al. 2020a; Kyron et al. 2021; Craddock and Telesco 2022). On the other hand, work-related stressors are commonly associated with – and influenced by – organizational factors, such as organizational resources, support, and culture (Purba and Demou 2019).

On the other hand, organizational culture has been consistently linked to stigma surrounding emotional disclosure and professional help-seeking, reinforcing reliance on suppression and avoidance-based coping strategies, which may hinder police officers from seeking appropriate help, exacerbate stress and compromise officers' well-being (Queirós et al. 2020b; Acquadro Maran et al. 2022; Gutschmidt and Vera 2022). Moreover, considering the stigma concerning mental health problems typical to the police culture, suppression could increase the PO's use of maladaptive coping and consequently increase mental health-related symptomatology (e.g. Violanti et al. 2017; Craddock and Telesco 2022; Gutschmidt and Vera 2022; Sweeney 2022). While these strategies can be counterbalanced by the frequent use of positive strategies, such as discussing the problem and providing support among colleagues, seeking help from professional services remains among the least used coping strategies by PO's (Queirós et al. 2013; Violanti et al. 2017; Terpstra and Salet 2020; Acquadro Maran et al. 2022; Craddock and Telesco 2022). The avoidance of professional services are choices that likely reflect police cultural values and the high negative stigma attributed to officers with mental health problems.

In policing contexts, where mental health stigma and occupational factors, such as cumulative exposure to critical incidents, may constrain emotional processing, the role of coping mechanisms and individual differences has been stressed as a central mediator regarding how officers experience and respond to stress, as well as PO's long-term well-being (Queirós et al. 2020a; Craddock and Telesco 2022; Gutschmidt and Vera 2022). Thus, emotional regulation can be framed as a dynamic, complex, and multi-valuation-based phenomenon, encompassing a set of strategies adopted toward a desired goal or emotional state (McRae and Gross 2020). Depending on the context and frequency, these coping strategies may function adaptively or maladaptively, being associated either with psychological well-being or to psychological strain (Berking and Wupperman 2012 ; Menefee et al. 2022; Brandão et al. 2023). Emotional distress may arise when there is a pattern of inflexibility in applying these strategies, with special relevance for avoidance, rumination, and suppression strategies, whereas cognitive reappraisal is generally correlated with improved emotional intelligence, psychological adjustment, and overall well-being (Gross and John 2003; Megías-Robles et al. 2019; Lincoln et al. 2022; Bonar et al. 2023; Brandão et al. 2023). Suppression-related strategies have been consistently linked to the policing context, and while suppression must be appreciated as *critically* adaptive during emergency situations and the following hours or days (McRae and Gross 2020; Gutschmidt and Vera 2022), the sustained use of suppression in these contexts has been consistently associated with emotional discomfort, accumulated stress, and other mental health problems, such as depression (Gross and John 2003; Moore et al. 2008; Cameron and Overall 2018; Fernandes and Tone 2021). This association may be due to its potential impact on key emotional intelligence abilities, such as accurately identifying the source of emotional distress, differentiating between emotional states, and adaptively reappraising the situation (Gross and John 2003; Cameron and Overall 2018; Megías-Robles et al. 2019). In conclusion, although organizational culture, stigma, and suppression-based coping have been repeatedly associated with poor mental health outcomes, most evidence within policing remains correlational and context-specific, leaving open questions about the causal mechanisms and their generalisability across different national settings.

The Portuguese context and research gap

Regarding the Portuguese policing reality, despite growing evidence about the organizational and surrounding environment contributors to stress and mental health risks (e.g. Costa et al. 2019), this context remains underrepresented within the international literature. Two large sample studies were developed with Portuguese police forces in 2020 to assess burnout, distress, and occupational stress. These studies reported significant depressive symptoms and burnout among this population, with more than 75 per cent of the sample scored higher than the cutoff value for work- and social-related occupational stressors. Moreover, 87 per cent of the police officers showed overall high operational and organizational stress levels (Queirós et al. 2020a, 2020b). These studies are in line with previous international research on police forces, including

worrisome stress levels, which may have a disquieting impact on POs' mental and overall health. These findings underline the need for further studies, and for interventions focused on the prevention of psychological distress and improving overall PO's resilience and well-being.

Therefore, the present study aims to examine stress levels and psychological counselling-seeking among officers of the Oporto division of the Polícia de Segurança Pública (PSP). Specifically, we investigated how coping styles and dimensions of emotional experience contribute to perceived stress levels, and how stress interacts with demographic and occupational factors. By situating these variables together, our aim was to provide an integrated understanding of the interplay between stress, coping, and help-seeking in this professional group, namely, how consistent risk factors such as professional experience influence stress vulnerability and the likelihood of seeking support. This study contributes to broadening the limited, scarce international understanding of these dynamics within the Portuguese policing context, despite growing recognition of the risks of stress, depressive symptoms, and suicide. In doing so, this study not only addresses a critical gap in the literature but also offers practical insights to inform organizational policy and training, with the ultimate goal of fostering a healthier and more resilient police force

Considering prior research on stress among police officers and the role of coping in resilience and mental health, some exploratory hypothesis were drawn: (H1) greater levels of suppression coping are correlated with increased stress levels; (H2) greater levels of stress are correlated with lower cognitive reappraisal and emotional differentiation; (H3) stress levels vary according to years of experience; (H4) cognitive reappraisal and emotional differentiation vary according to years of experience, namely higher levels are expected among more experienced officers; and (H5) lower cognitive reappraisal and emotional differentiation are expected to correlate with lower psychological support-seeking behaviours.

METHODS

Research design

This study is part of a broader, international initiative named the *Mental Health NeuroForce* Project. This research holds meticulously to all deontological ethical principles, in full compliance with national data protection regulations, as overseen by the National Data Protection Authority. This investigation is structured as a two-step cross-sectional study, concentrating on the Oporto district area. In this initial phase, the primary focus is to assess: (1) perceived stress levels; (2) main emotion regulation strategies adopted by police officers, and to find if (3) emotional experience and coping-related variables, along with (4) years of service, rank, and education are significant predictors of perceived stress levels.

Participants

The initial sample was composed of 123 PSP officers working in the metropolitan Oporto district, representing approximately 4 per cent of the active force in this district. According to the last official document (PSP, 2022), the total police force in Portugal includes 21,000 officers, of whom 89.14 per cent are male and 10.86 per cent are female. Over half of these officers were reported to be between 45 and 59 years-old (52 per cent). Concerning rank, 83 per cent are agents, 10 per cent chiefs, 4 per cent *official* and the remaining were technical staff. In 2022, 3,164 were deployed across the divisions of the Metropolitan Command of Oporto, of whom 85.6 per cent ($n = 2{,}707$) were agents, 9.7 per cent ($n = 307$) were chiefs, 3.3 per cent ($n = 104$) were *officials*, and the remaining were other technical staff (1.5 per cent) (PSP, 2022). No additional work-related or sociodemographic data are provided with specificity to the deployment area.

From the 123 participants, 12 did not complete any information beyond the consent process (9.8 per cent), and only 82 completed the survey in full, corresponding to 2.6 per cent of the Porto PSP forces. All participants volunteered to partake in the study. Regarding gender, the sample was composed of 106 male officers (86.2 per cent), only 5 female officers (4 per cent). The age varied between 20 and 59 years old ($M = 43.1$; $SD = 8.1$). The years of service varied from 1 to 37 years ($M = 20.2$; $SD = 7.89$), of which 6.7 per cent ($n = 7$) served up to 5 years, 4.8 per cent ($n = 5$) served between 6 and 10 years, 17.1 per cent ($n = 18$) served between 11 and 15 years, 15.2 per cent ($n = 16$) served between 16 and 20 years, 31.4 per cent ($n = 33$) served between 21 and 25 years, 19 per cent ($n = 20$) between 26 and 30 years, and 5.7 per cent ($n = 6$) served above 30 years in PSP services. Approximately three-quarters (75.6 per cent; $n = 93$) of the sample was composed of agents (base level ranking officers), among higher ranking officers, 10.6 per cent ($n = 13$) were chief police officers (mid-level ranking officers) and 3.3 per cent ($n = 4$) were *oficial* (high ranking/commanding officers), and 0.8 per cent ($n = 1$) *other* non-specified. From these, 92.7 per cent ($n = 104$) are 'operational', i.e. front-line officers irrespective of rank, and only 7.3 per cent ($n = 7$) do 'non-operational' work, i.e. administrative work (paperwork, handling incoming calls, etc.). Regarding educational qualifications, 2.4 per cent ($n = 3$) completed middle school (seventh to ninth grade), 69.1 per cent ($n = 85$) completed high school (A levels/further education), followed by 17.1 per cent ($n = 21$) of undergraduates, and a minority who completed a master's degree (1.6 per cent; $n = 2$). Overall, the sample broadly reflects the rank distribution of the PSP Oporto force. Agents constitute the majority in both the sample and the official Oporto PSP figures, although they are slightly underrepresented in the present study (sample: 75.6 per cent vs. PSP Oporto: 85.6 per cent). Conversely, higher-ranking officers are marginally overrepresented (chiefs sample: 10.6 per cent vs. PSP Oporto: 9.7 per cent; *officials* both cases 3.3 per cent). With respect to gender, female officers are markedly underrepresented in the sample (4 per cent) relative to official PSP statistics (approximately 10.9 per cent nationally), although reflecting a persistent structural gender imbalance within the police force.

Data collection

A mixed approach to recruiting participants was adopted, and both online and face-to-face contact was established with all squads in the Oporto district. A link shared by email or by a

flyer included a QR code, which forwarded to a Qualtrics online survey. This survey began with information on the project, participation rights, and a consent form. More specifically, before filling in the sociodemographic information and the questionnaires, information on the project's goals, risks, and benefits was disclosed, and participants had to sign a free informed consent. Following consent, sociodemographic information, and three questionnaires focused on stress, emotional regulation, and emotional experience were presented to participants. The data collection was carried out from March to July 2022. After data collection completion, the data were exported to IBM SPSS Statistics (28.0).

Instruments

The survey was structured into four sections and included a set of instruments selected on both theoretical and context-driven criteria. The Perceived Stress Scale (PSS-10) was chosen as a global measure of subjective stress appraisal, given its extensive use in policing research, including validated applications in Portuguese samples, which allows for contextual and cross-study comparability. The Emotion Regulation Questionnaire (ERQ) was selected to capture two core emotion regulation strategies of particular relevance in policing contexts, namely cognitive reappraisal and expressive suppression, with a specific focus on suppression as a commonly observed regulation strategy in police work. Finally, the Range and Differentiation of Emotional Experience Scale (RDEES) was included to assess individual differences in emotional awareness and differentiation, constructs that are increasingly recognized as protective factors in high-stress occupational settings. Taken together, these instruments allow for an integrated assessment of stress, emotion regulation, and emotional experience within the organizational and cultural context of Portuguese policing.

The survey comprised the following sections:

1. *Sociodemographic and other occupational information* (age, sex, years of service, education level, job post, psychological support).
2. *Perceived Stress Scale-10* (PSS-10; Cohen et al. 1983; validated for the Portuguese population by Trigo et al. 2010): 10-item questionnaire, using a 5-point Likert scale ('*0 – never*' to '*4 – very frequent*'), designed to assess global perceived stress in daily life. In the Portuguese version, clinical cutoff scores were determined according to gender (>20 for males, >22 for females) using normative and clinical samples (Trigo et al. 2010). The PSS-10 showed good internal consistency ($\alpha = 0.92$) in the present study.
3. *Emotional Regulation Questionnaire* (ERQ; Gross and John 2003; validated by Vaz et al. 2008): ten-item scale, using a 7-point Likert scale ('*1 – strongly disagree*'; '*4 – neutral*'; '*7 – strongly agree*'), designed to assess two emotion regulation strategies. The cognitive reappraisal subscale, i.e. antecedent-focused strategies employed to reinterpret and modify the emotional response to a situation (items 1, 3, 5, 7, 8, 10); and the expressive suppression subscale, i.e. response-focused strategies to actively inhibit emotional behaviour (items 2, 4, 6, 9). These constructs showed acceptable internal consistency in the present study with ($\alpha = 0.81$ and $\alpha = 0.77$, respectively).
4. *Range and Differentiation of Emotional Experience Scale* (RDEES; Kang and Shaver 2004; validated for a Portuguese population by Vaz et al. 2008): 14-item scale, using a 7-point Likert scale ('1 – Strongly disagree', '4 – Neutral', '7 – Strongly agree'), designed to assess a respondent's ability to identify and differentiate emotions. It comprises two subscales: the *Range scale*, i.e. the variety and intensity of experienced emotions (items 7, 5, 1, 9, 13, 3, 11), and the *Differentiation scale*, i.e. the ability to differentiate between emotional states and experiences (items 12, 14, 8, 10, 4, 2, 6). Due to reliability and structural validity issues, this scale was adapted within this study's framework, and items 1, 2, 5, 9, and 11 were dropped. The first subscale comprised the items 4, 6, 8, 10, 12, and 14 ($\alpha = 0.89$), and the second comprised the items 3, 7, 13 ($\alpha = 0.80$). See further information in the results section.

Data analysis

Of the 123 officers who initially accessed the survey, 12 (9.8 per cent) did not provide any data beyond informed consent and were excluded from all analyses. Of the remaining 111 respondents, only 82 completed all study measures and were therefore retained for inferential analyses. Missing data within completed questionnaires were minimal and handled using pairwise deletion for exploratory factor analyses and listwise deletion for regression models. Given exclusion criteria on non-operational officers and the small number of female officers, these subgroups were excluded from the inferential analysis. Specifically, female officers ($n = 4$; 4.9 per cent) and non-operational officers ($n = 5$; 6.1 per cent) were retained for descriptive analyses only, as their small numbers precluded reliable statistical comparison. Accordingly, rank and education were collapsed into fewer categories. Rank was grouped into two categories: *basic rank* (agent), following the original rank in the database ($n = 93$), and *higher rank*, comprising chief ($n = 13$) and *oficial* ($n = 4$) officers groups. Education was also recoded into two categories: *up to high school*, comprising middle ($n = 3$) and high school ($n = 85$), and *higher education*, comprising undergraduate ($n = 21$) and master ($n = 2$) degrees.

Regarding data analysis, IBM SPSS Statistics (28.0) was used to conduct descriptive and multivariate analyses of the data. Exploratory factor analysis (EFA) of each instrument was used to assess the fit of these instruments to the Portuguese POs population. This was followed by confirmatory factor analysis (CFA) on each instrument to test the factor structures, using IBM SPSS AMOS 28.0. Principal axis factoring (PAF) with oblique rotation was used in the EFA, and maximum likelihood (ML) estimation was used in the CFA. Preliminary EFA analyses used pairwise deletion for missing data in these separate assessments, while subsequent multivariate analyses used listwise deletion.

Assumption testing was systematically conducted. Normality assessment of the data was performed using kurtosis and skewness cutoff values of ±1.96 (Ghasemi and Zahediasl 2012; Mishra et al. 2019). For regression models, collinearity was

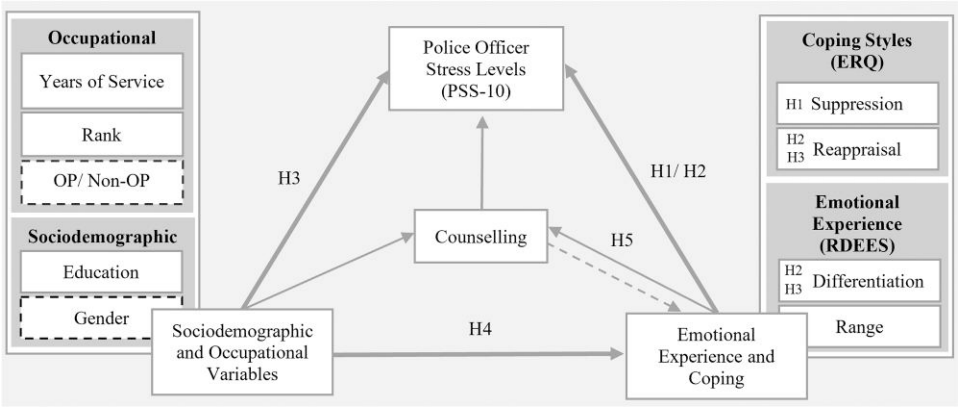

Figure 1 Model illustrating relationships between variables. OP = Operational; Non-OP = Non-Operational; Continuous arrows convey direct, on-time impact on a specific variable. These correspond to the hypotheses tested in the present cross-sectional study. Dashed arrows convey expected impact on a specific variable, over time. These longitudinal relationships could not be tested in the present cross-sectional study. Variables delimited by a dashed box are included for the theoretical model as part of the relevant risk factors to consider; however, they were not included in the multivariate analysis due to the homogeneity of data and lack of representativeness of certain categories for appropriate data analysis.

assessed via variance inflation factors (VIF; <5), which were within acceptable thresholds, and heteroscedasticity was examined using visual inspection of residual plots, which did not suggest systematic violations. While no formal correction for multiple comparisons was applied across exploratory analyses, interpretation was guided by theoretical relevance and effect sizes. Given the study's restricted sample size, a multiple linear regression analysis was performed to assess predictors of perceived stress. This included the independent psychological variables (emotional regulation and experience), and the sociodemographic variables (gender, rank, education, and time of service), which were entered simultaneously. Finally, binary logistic regression was used to explore predictors of psychological counselling–seeking, with rank and education as categorical variables. Model fit was assessed through the Hosmer–Lemeshow test. Figure 1 depicts the expected relationships between our measured variables and constructs.

RESULTS

Due to the small sample size and homogeneity in the distribution of some variables, most findings are neither conclusive nor generalisable to the wider Portuguese police population. For the present study, we did not consider gender differences for statistical data analysis for lack of representativeness by women POs ($n = 5$), although we considered gender for descriptive purposes. Data regarding descriptive analyses for all instruments according to gender, rank, and operational work are presented in Table 1.

Participants scored mean values within the averages expected for the Portuguese population (Vaz et al. 2008; Trigo et al. 2010). Considering perceived stress levels, the Portuguese validation of PSS-10 established a cutoff point above the 80th percentile (20 for males; ≥22 for females (Trigo et al. 2010). Although the PSS-10 average score was not significantly higher than the average Portuguese population, approximately 35.3 per cent of the male officers in this study scored above the cutoff point, a pattern consistent with both those reported in Portuguese police samples exposed to high operational and organizational stress, and the international findings in police populations (e.g. Queirós et al. 2020a, 2020b). In contrast, 79.3 per cent ($n = 88$) of the participants have never sought psychological counselling compared to 20.7 per cent ($n = 23$) who did. Further, among those who scored above the stress threshold, only 16.7 per cent mentioned having sought professional psychological help, reinforcing prior evidence of low help-seeking in policing contexts. Regarding gender, despite the small, unrepresentative number of female officers in our sample (4 per cent), none of the female police officers perceived high stress levels (≥22), and they scored below the average population (−1 *SD*) on perceived stress and emotional experience subscales. With respect to males, front-line officers compared to officers with mainly administrative tasks (OP vs. non-OP), the latter scored above the cutoff value on perceived stress levels (Trigo et al. 2010), particularly agents. Among the non-operational officers, a female agent and a male chief officer also scored slightly higher on cognitive reappraisal, with the first also showing lower suppression and emotional differentiation scores. Regarding officer ranks, overall, the lower-ranking officers scored higher perceived stress levels, higher suppression, and lower cognitive reappraisal coping compared to higher-ranking officers. Overall, emotion regulation patterns in this sample align with previous policing research, characterized by a greater reliance on suppression relative to reappraisal, particularly among front-line and less experienced officers. However, these differences must be cautiously interpreted, given the substantial difference in the sample sizes among these categories.

Considering characteristics of the Oporto PSP sample, an EFA of each instrument was conducted to assess item fit (Appendix 1). Principal axis factoring (PAF) with oblique rotation was used, considering the sample size and the conceptual relationship among items. All instruments were factorable (Barttlet's test, $P < 0.001$; KMO > 0.70 for ERQ items, KMO > 0.80 for PSS-10 and RDEES items). Regarding PSS-10, despite recent evidence (Yılmaz Koğar and Koğar 2024), that

Table 1 Compare means for groups of Oporto PSP officers.

Variables of interest			Dependent variables: perceived stress, coping and emotional experience				
Gender	**OP/Non-OP**	**Rank**	**PSS-10 Mean (*SD*)**	**ERQ_CR Mean (*SD*)**	**ERQ_ES Mean (*SD*)**	**RDEES_ED Mean (*SD*)**	**RDEES_ER Mean (*SD*)**
Female	*Operational*	*Agent*	**8.0 (6.00)** ($n = 3$)	3.41 (1.69) ($n = 4$)	2.75 (1.67) ($n = 4$)	**2.83 (0.73)** ($n = 3$)	**2.89 (1.26)** ($n = 3$)
	Non-Operational	*Agent* ($n = 1$)	8.0 (−)	**5.67** (−)	**1.50** (−)	**3.33** (−)	5.33 (−)
Total			**8.0 (4.90)** ($n = 4$)	3.87 (1.77) ($n = 5$)	2.50 (1.55) ($n = 5$)	**2.96 (0.64)** ($n = 4$)	**3.50 (1.60)** ($n = 4$)
Male	*Operational*	*Agent*	17.10 (7.35) ($n = 62$)	4.33 (1.26) ($n = 72$)	4.26 (1.36) ($n = 72$)	4.12 (1.11) ($n = 59$)	4.58 (1.18) ($n = 62$)
		Chief	15.82 (6.99) ($n = 11$)	4.59 (1.12) ($n = 11$)	3.50 (1.49) ($n = 11$)	4.05 (0.70) ($n = 11$)	4.48 (1.03) ($n = 11$)
		Oficial	**7.5 (6.36)** ($n = 2$)	4.78 (0.10) ($n = 3$)	3.92 (1.01) ($n = 3$)	4.83 (1.18) ($n = 2$)	4.83 (0.71) ($n = 2$)
		Other ($n = 1$)	20.0 (−)	4.33 (−)	**5.00** (−)	3.67 (−)	**3.67** (−)
	Total OP		16.70 (7.32) ($n = 76$)	4.38 (1.21) ($n = 87$)	4.16 (1.37) ($n = 87$)	4.12 (1.05) ($n = 73$)	4.56 (1.14) ($n = 76$)
	Non-Operational	*Agent*	**22.75 (9.07)** ($n = 4$)	4.25 (1.73) ($n = 4$)	4.31 (0.85) ($n = 4$)	5.00 (0.77) ($n = 4$)	5.42 (0.50) ($n = 4$)
		Chief ($n = 1$)	16.0 (−)	**6.0** (−)	3.5 (−)	4.5 (−)	4.0 (−)
	Total Non-OP		21.40 (8.41) ($n = 5$)	4.6 (1.69) ($n = 5$)	4.15 (0.82) ($n = 5$)	4.90 (0.70) ($n = 5$)	5.13 (0.77) ($n = 5$)
Total			16.99 (7.42) ($n = 81$)	4.39 (1.23) ($n = 92$)	4.16 (1.35) ($n = 92$)	4.17 (1.05) ($n = 78$)	4.60 (1.12) (n = 81)
Total Police Sample			16.56 (7.55)	4.37 (1.26)	4.07 (1.40)	4.11 (1.06)	4.55 (1.16)
Average Population Scores			15.3 (6.6)	4.36 (1.17)	3.45 (1.24)	4.54 (0.92)	4.83 (0.85)

$N = 97$; *SD* = Standard Deviation; OP/Non-OP = Operational Vs. Administrative Work; ERQ_CR = Cognitive Reappraisal Subscale; ERQ_ES = Expressive Suppression Subscale; RDEES_ED = Emotional Differentiation; RDEES_ER = Emotional Range; Values in bold signal scores higher or lower than the expected considering the general population scores and standard deviation.

suggests a two-factor model for this instrument, a unidimensional model was retained following eigenvalues and reliability analysis ($\alpha = 0.92$), consistent with the original scale. For the ERQ, eigenvalues and a scree plot initially suggested a distribution of items in 3 factors, with items 1 and 3 forming a separate cluster. These belong originally to the *cognitive reappraisal* subscale, possibly reflecting language translation differences. Following theoretical assumptions, a two-factor solution was retained (Gross and John 2003), following the original scale: Factor 1 – *cognitive reappraisal* subscale (items 1, 3, 5, 7, 8, 10; $\alpha = 0.81$), and Factor 2 – *expressive suppression* (items 2, 4, 6, 9; $\alpha = 0.77$).

As for the RDEES instrument, eigenvalues initially suggested a four-factor solution. However, reliability analysis indicated a poor fit for this sample (see Supplementary Tables S1 and S2). Based on communalities, the correlation matrix, and the instrument's theoretical assumptions (Kang and Shaver 2004), we retained a two-factor model using nine of the original 14 items. Thus, Factor 1 – *emotional differentiation* subscale comprises six items (items 4, 6, 8, 10, 12, 14; $\alpha = 0.89$). Despite initially loading on another factor, item 8 aligned semantically and statistically with *the emotional differentiation* subscale, improving reliability, and thus being retained in Factor 1. Factor 2 – *emotional range* subscale comprised three items (items 3, 7, 13; $\alpha = 0.80$). Following the EFA, confirmatory analyses of each instrument were performed using Maximum Likelihood (ML) estimation in IBM SPSS AMOS (28.0). We considered standard values for confirmatory analysis (Hooper et al. 2008; Goretzko et al. 2024), also considering recommendations for smaller sample sizes and model complexity (Niemand and Mai 2018). The PSS-10 unidimensional model showed an excellent model fit ($\chi^2(28) = 21.34$, $P < 0.001$; CFI = 1.00; TLI = 1.00; RMSEA = 0.00; SRMR = 0.03[1]), in comparison to the two-factor approach ($\chi^2(27) = 36.04$, $P < 0.001$; CFI = 0.98; TLI = 0.97; RMSEA = 0.06; SRMR = 0.09). The ERQ model fit was acceptable ($\chi^2(31) = 48.56$, $P < 0.05$; CFI = 0.95; TLI = 0.92; RMSEA = 0.08; SRMR = 0.07), with factor loadings ranging from 0.71 to 1.0 for *expressive suppression*, and 0.44 to 1.0 for the cognitive *reappraisal dimension*. Finally, the RDEES overall model fit was very good ($\chi^2(22) = 27.25$, $P < 0.001$; CFI = 0.99; TLI = 0.98; RMSEA = 0.05; SRMR = 0.05), with factor loadings from 0.76 to 1.0 for *emotional differentiation*, and 0.85 to 1.04[2] for the *emotional range* dimension. The correlation matrix for this study is reported through a heatmap in Fig. 2. As expected, subscales within the same instrument were related. The most noteworthy and significant correlation found was between perceived stress and *expressive suppression*. Other, weaker but still significant correlations, were found between *emotional range* and perceived stress. The same results were observed for counselling and *emotional range*, and for

[1]*Note:* CFI, Comparative Fit Index; TLI, Tucker–Lewis index; RMSEA, Root Mean Square Error of Approximation; SRMR, Standardized Root Mean Square Residual
[2]Values above 1 can be framed as 'Heywood cases' in structural modelling, which in this case might have been affected by small sample size.

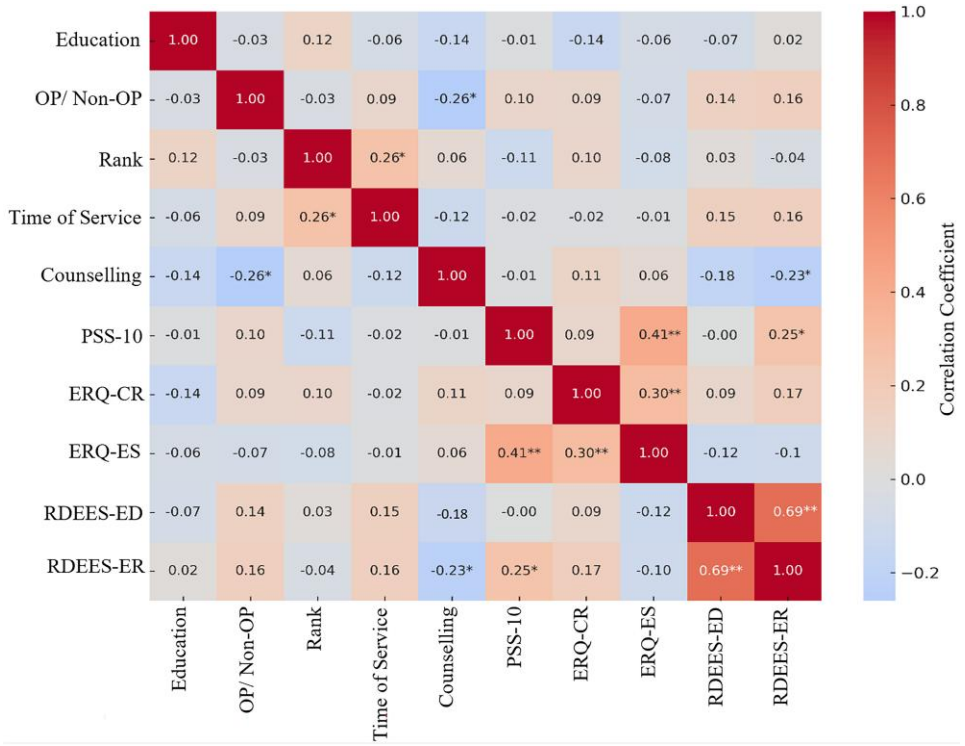

Figure 2 Heatmap for Pearson correlation between variables of interest and constructs, using two-tailed significance. $N = 82$; $^{*}P < 0.05$; $^{**}P < 0.01$; Variables of the study depicted in the horizontal and vertical axes. Education (up to high school = 1; higher education = 2); OP/Non-OP (Operational = 1; Administrative Work = 2); Rank (Agent = 1; Higher Ranks = 2); Cs = Counselling (Yes = 1; No = 2); ERQ_CR = Cognitive Reappraisal Subscale; ERQ_ES = Expressive Suppression Subscale; RDEES_ED = Emotional Differentiation; RDEES_ER = Emotional Range; Darker cells represent stronger correlations among variables, cooler tones represent negative correlations, and warmer tones represent positive correlations among variables. At $r = 0.22$, a sample size of $n = 80$ yields a significant correlation at alpha < 0.05. At $r = 0.285$, a sample size of $n = 80$ yields a significant correlation at alpha < 0.01.

counselling and operational work. This latter finding was negatively correlated, meaning that front-line POs are less likely to seek professional psychological support. Among demographic and occupational variables, as expected, rank was positively correlated, weakly, with time of service.

Finally, multiple linear regression within the general linear model framework was used to test the predictive effects of emotion regulation strategies, emotional experience, time of service, academic level, rank and psychological support on perceived stress levels (Table 2). We tested the regression model using both simultaneous and hierarchical entry of predictors (first level: demographic-occupational variables; second level: emotion-related variables). As results were highly similar, the simultaneous model will be reported, as it provides a more parsimonious overview of the relative contribution of all predictors. The regression model revealed a good fit ($F(8, 73) = 4.13$, $P < 0.001$), explaining 31 per cent of the variance in perceived stress scores ($R^2 = 0.31$, adjusted $R^2 = 0.24$). Among the predictors, *expressive suppression* emerged as one of the most significant predictors of perceived stress levels ($B = 2.28$, $SE = 0.53$, $\beta = 0.46$, $P < 0.001$; 95 per cent CI [1.23, 3.33]), showing a moderate-to-large effect size, indicating a meaningful relationship between emotional suppression and perceived stress. Both constructs of emotional experience also emerged as relevant predictors of stress levels, with *emotional range* showing a significant, and large effect on stress levels ($B = 3.46$, $SE = 0.90$, $\beta = 0.54$, $P < 0.001$; 95 per cent CI [1.67, 5.25]), compared to a weaker, yet significant moderate negative effect by *emotional differentiation* ($B = -2.03$, $SE = 0.95$, $\beta = -0.30$, $P = 0.035$; 95 per cent CI [−3.92, −0.14]), indicating that officers who experience a wider range of emotions during duty and across the day report substantially higher perceived stress, while officers who are better able to distinguish between their emotional states experience lower stress. This means that emotional experience processes may be practically relevant mechanisms underlying stress in police work, suggesting that stress prevalence may be partly driven by frequent emotional activation combined with limited emotional discrimination during

Table 2 Multiple linear regression predicting perceived stress levels.

Predictor	*B*	SE	95% CI for *B*	*P*
Cognitive Reappraisal	− 0.21	0.18	[−0.57, 0.15]	0.254
Expressive Suppression	2.28	0.53	[1.23, 3.33]	<0.001
Emotional Differentiation	−2.03	0.95	[−3.92, −0.14]	0.035
Emotional Range	3.46	0.90	[1.67, 5.25]	<0.001
Time of Service	0.05	0.04	[−0.03, 0.13]	0.217
Rank	−0.86	0.71	[−2.27, 0.55]	0.225
Education	0.49	0.52	[−0.55, 1.53]	0.341
Psychological Counselling	−0.37	0.43	[−1.22, 0.48]	0.389

$N = 82$. Model fit: $F(8, 73) = 4.13$, $P < 0.001$, $R^2 = 0.31$, Adjusted $R^2 = 0.24$.

operational demands, and may represent a key vulnerability factor in policing contexts. On the contrary, officers who have higher levels of emotional differentiation report lower levels of stress. The other variables did not significantly predict perceived stress levels in police officers ($P > 0.05$), including *cognitive reappraisal* and overall occupational and sociodemographic-related variables. These results indicate that, beyond the emotion-related constructs except *cognitive reappraisal*, demographic and occupational characteristics did not substantially contribute to explaining perceived stress in this sample, with minimal practical relevance.

Additionally, a binary logistic regression was conducted to explore predictors of psychological counselling. Rank and education were entered as categorical variables. The model showed acceptable fit (Hosmer–Lemeshow test, $P > 0.05$) but was not statistically significant ($\chi^2(8) = 10.33$, $P = 0.243$), showing that the included predictors did not significantly differentiate between officers who sought or did not seek psychological support.

DISCUSSION

Main findings

This study found that expressive suppression and a broader repertoire of emotional experiences significantly predicted perceived stress levels among Oporto PSP officers, confirming our first hypothesis. Although the overall sample reported stress levels within the normative range for the Portuguese population, nearly one-third exhibited elevated stress, with a small subset experiencing severely high levels of perceived stress. However, these figures are relatively lower than those reported in previous large-scale studies of Portuguese police, where more than 75 per cent of officers scored above the cutoff for work- and social-related occupational stress, and 87 per cent exceeded thresholds for operational and organizational stress (Queirós et al. 2020a, 2020b). One possible explanation is that voluntary participation and the smaller sample size may have led to underrepresentation of those experiencing higher levels of psychological strain and overrepresentation of those more sensitive to mental health issues in police work. Nonetheless, the identification of greater reliance on suppression strategies with increased levels of stress echoes broader research (Gutschmidt and Vera 2022; Lincoln et al. 2022; Menefee et al. 2022; Brandão et al. 2023) and underscores the relevance of these constructs in the Portuguese police context. Furthermore, higher stress levels were also linked with the perception of wider and more intense emotional experiences in everyday lives. When considered alongside high levels of suppression, this combination may place increased demands on individual officers' emotional and psychological resources, potentially contributing to long-term mental health difficulties if not properly addressed (e.g. Gross and John 2003).

On the other hand, emotional differentiation emerged as a potential protective factor against maladaptive stress. This aligns with international evidence linking increased ability to identify and distinguish discrete emotional states to adaptive emotion regulation, as it is associated with improved psychological adjustment (e.g. Bonar et al. 2023). Officers who can differentiate their emotions with greater precision would be able to reduce emotional ambiguity and improve performance under high-stakes situations. Portuguese evidence reinforces this perspective as two large-scale studies with national police reported that problem-focused coping was associated with lower distress, whereas avoidant coping strategies were linked to heightened burnout and psychological strain (Queirós, et al. 2020a, 2020b). Nonetheless, against our initial prediction, cognitive reappraisal – typically considered an adaptive coping strategy and correlated to better mental health outcomes (e.g. Lincoln et al. 2022; Brandão et al. 2023) – did not emerge as a significant protective factor of stress in our sample. This lack of association may reflect differences on stressors and emotional experience demands concerning the nature of police work (operational vs. non-operational), as well as cultural and organizational dynamics within the PSP, where suppression and avoidance are more culturally reinforced than cognitive reframing. It also raises the possibility that officers may not receive sufficient training or institutional support to develop and apply reappraisal efficiently in high-stress situations. Thus, in the PSP context, where high occupational stress has been documented, strengthening officers' capacity to label and distinguish emotions may be a practical mechanism, through psychoeducation and soft-skills training, to reduce perceived stress and improve officers' well-being.

Concerning gender, differences in policing have been consistently documented for specific mental health outcomes, including depression, anxiety, and coping styles. However, findings remain heterogeneous across contexts and are frequently constrained by the structural underrepresentation of women in police forces (Violanti et al. 2017; Syed et al. 2020; Krishnan et al. 2022). In the present study, only five female officers were included (4 per cent, compared to 10.8 per cent nationally), reflecting the persistent underrepresentation of women within police forces. Although the Oporto sample reflects the national demographic trend (with men representing nearly 90 per cent of PSP officers) (PSP, 2022), its limited size prevents more robust analyses of key sociodemographic variables, particularly gender. The small number of female officers limits meaningful gender comparisons, despite their recognized relevance in international and Portuguese research on police well-being. Although the reasons behind this underrepresentation have not been measured in this study, this imbalance might be linked to the male-centred police culture (e.g. Terpstra and Salet 2020; Acquadro Maran et al. 2022; Gutschmidt and Vera 2022 ; Traynor et al. 2024). On the other hand, none of the variables significantly predicted psychological counselling-seeking, specifically, the hypothesized associations with cognitive reappraisal and emotional differentiation. Moreover, only 20 per cent mentioned having sought psychological counselling, and within those with higher perceived levels of stress, only 16.7 per cent sought psychological professional help. The lack of significant findings might reflect the existing literature on mental health stigma within police contexts (Violanti et al. 2017; Queirós et al. 2020a; Acquadro Maran et al. 2022; Traynor et al. 2024). The weak correspondence between stress severity and help-seeking behaviours observed in this study mirrors inconsistencies in the literature, suggesting that help-seeking in policing may not be primarily

driven by psychological strain and symptom severity but by cultural norms, stigma, and emotion regulation styles. These research gaps include the need for more in-depth longitudinal research concerning mental health stigma, as well as the barriers that may prevent Portuguese police officers from seeking psychological support.

As for time of service, previous literature points to time of service as a risk factor for stress, burnout, and other mental health issues, as cumulative, chronic exposure to critical and potentially traumatic incidents may affect both physical and mental health of POs (Violanti et al. 2016b; Violanti et al. 2017; Craddock and Telesco 2022). By contrast, other studies argue that years of experience enable police officers to acquire coping strategies that allow them to adapt to the normative constraints of the police career and to develop resilience (Balakrishnamurthy and Shankar 2009; Queirós et al. 2020a). In the present study, we found no differences regarding other variables of interest across different years of service. In the Portuguese policing context, where operational stressors have been recently documented (Queirós et al. 2020b), against our initial hypothesis, the non-significant impact of sociodemographic and occupational variables in our study suggests that police-related stress may be more strongly influenced by individual coping and emotional processes, that moderate how one appraises stress, compared to the relevance of other sociodemographic variables. Although years of service have been linked to stress and mental health outcomes, findings remain inconsistent across policing studies. This variability likely reflects differences in what 'experience' represents across samples and settings, as well as consistent operationalization and measurement of cumulative stress exposure, clinical symptoms, and occupational factors across studies and time (e.g. Violanti et al. 2016a; Costa et al. 2019; Queirós et al. 2020a). In the present sample, the absence of significant years of service effects may therefore reflect both restricted variability and the possibility that perceived stress is more strongly shaped by emotion-related processes than by cross-sectional outcomes.

This indicates the need for further studies in bigger representative samples to understand whether perceived stress levels are dispersed homogeneously across different lengths of service, or whether it might be possible to distinguish diverse patterns of stress and other indicators of psychological well-being, including both risk and protective factors, associated with years of experience. While much policing research prioritizes structural and occupational predictors of stress, findings across studies remain inconsistent. The present results suggest that emotion-related processes may account for a larger proportion of variance in perceived stress than traditional structural indicators, offering a potential explanation for the instability of occupational predictors across samples.

Practical and organizational implications

This preliminary study provides relevant insights on the impact of coping styles and perceived stress, particularly suppression, as well as police willingness to seek psychological counselling. The results support the need for further studies that delve into the impact of mental health stigma and emotional intelligence-related constructs on stress resilience and overall well-being. Therefore, the present study reinforces the need for police organizations to adopt a multi-level, comprehensive, and inclusive approach to mental health that includes both the individual officers and the entire police organizational structure. Future interventions will benefit from focusing on improving resilience, emotional regulation, as well as addressing the stigma surrounding mental health and professional psychological support. By prioritizing police officers' well-being through supportive practices, the research community allied with the police organization can contribute to a healthier and more effective police force, benefiting both its members and the communities they serve.

Aligned with the preceding observations, emotional awareness and stress resilience studies that focus on mindful practices and biofeedback have become a growing field in research relating to the police community. These findings suggest that physical and mental health are interdependent, and multiple benefits arise from practices focused on improving emotional reactivity and awareness concerning emotionally challenging situations specific to police duties (LaMontagne et al. 2016; Di Nota et al. 2021; Khatib et al. 2022; Michela et al. 2022; Moreno et al. 2024). In fact, within the scientific and practitioners' communities, it has been argued that mental health and physical health should be contemplated as a continuum. Thus, to improve one's own ability to regulate emotions and to increase awareness of emotional reactivity may help improve resiliency and general well-being, thereby decreasing the risk of developing other psychopathological conditions (Di Nota et al. 2021; Gutschmidt and Vera 2022; Khatib et al. 2022; Menefee et al. 2022; Michela et al. 2022). Therefore, many authors suggest that interventions aimed at police mental health should address stigma that is related to: (1) reporting stressful experiences, (2) mental health counselling, (3) psychoeducation (Acquadro Maran et al. 2022; Craddock and Telesco 2022), and (4) resilience training addressing coping and reactivity awareness (Romosiou et al. 2019; Di Nota et al. 2021; Khatib et al. 2022; Michela et al. 2022; Moreno et al. 2024), namely reappraisal, breathing techniques and other sustained effective mechanisms that support resilience and improved mental health.

Finally, these practices should not only be implemented individually or through occasional training but also should be a fundamental part of the organizational structure and practices in police organizations. This recommendation builds on relevant organizational variables that have been highlighted as one of the main underlying causes of burnout, stress, and other psychopathological symptoms in police forces (Violanti et al. 2017; Acquadro Maran et al. 2022; Craddock and Telesco 2022; Gutschmidt and Vera 2022). These new practices lead to tangible and intangible costs to the government, society, police organizations, and, most of all, to the officers and their families (Garbarino et al. 2013). Further, this revised perspective highlights the need for more inclusive organizational practices that prioritize adaptive coping and holistic well-being, encompassing physical and mental health, as well as personal and contextual factors such as family dynamics and work-life integration, an idea that has been emphasized in previous studies (Romosiou et al. 2019; Acquadro Maran et al. 2022; Craddock and Telesco 2022; Krishnan et al. 2022; Sweeney 2022).

Limitations and future research directions

This study has some limitations. The relatively small and homogenous sample limits the generalisability of findings to the broader PSP population. A much larger sample is needed to be representative of the force in the Porto metropolitan area. Additionally, despite our sample following the same demographic trend as the national overview, the limited number of responses restricted the analysis of key sociodemographic variables, especially gender, a widely discussed risk factor for police well-being within the literature. In terms of methods, the small sample precluded the testing of a full structural model in the analysis of the results. Further, inconsistencies in questionnaire completion reduced the available data for analysis. Despite these constraints, our results revealed significant insights concerning stress, coping tendencies, and psychological support-seeking behaviours among police officers. While the results of the present study should be interpreted with caution, mainly due to the small sample, this sample does provide valuable insights into the psychological and organizational realities of the Oporto police force. Finally, voluntary participation may have introduced some degree of self-selection bias, as individuals more open to discussing stigma and mental health may have been more inclined to take part. Nonetheless, in studies of this nature, ensuring that participation is entirely voluntary remains essential. Future research should place even greater emphasis on guaranteeing full anonymity and confidentiality so that participants feel safe to disclose stress-related reactions and help-seeking behaviours without fear of stigma (e.g. Violanti et al. 2017). Finally, the cross-sectional nature of this research limits the long-term analysis of the principal hypotheses in this study.

Future research should include larger and more diverse samples and contemplate more comprehensive approaches, addressing social support and family relationships, as these variables have been framed as relevant protective factors. Subsequent research may examine the influence of gender on stress levels and coping strategies within the police force, as well as address the quantity and intensity of exposure to critical incidents, i.e. to better understand how gender and cultural dynamics interact with stress and help-seeking behaviours. In addition, the results found in the present study concerning higher avoidance and suppression mechanisms in comparison to cognitive reframing may reflect specific cultural and organizational dynamics within the PSP. In the Portuguese context, where organizational stressors and cultural stigma surrounding mental health have been repeatedly identified, these questions remain underexplored. Addressing these factors, along with proper recognition and inclusion of broader contextual, organizational and physical aspects of police work, are essential to inform PSP-specific interventions and policies. Lastly, longitudinal studies are needed to trace the evolution of stress and coping over years of service, while evaluating the impact of organizational practices, such as psychoeducation, soft skills training, and leadership styles on officers' mental health. Longitudinal studies will be necessary in order to provide relevant insights for targeted interventions aimed at strengthening mental health among police officers of every rank in the force.

As the first phase of a two-step cross-sectional project, this study lays the groundwork for a follow-up phase that will assess stress awareness through a comparison of objective (peripheral physiological) and subjective (self-report) measures in a laboratory setting. Given that stress awareness is crucial in managing critical situations effectively, this research will contribute to a more comprehensive understanding of the challenges faced by Portuguese police officers and will offer valuable directions for future studies and interventions aimed at promoting officers' mental health and well-being.

SUPPLEMENTARY MATERIAL

Supplementary material is available at *Policing* online.

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CONFLICTS OF INTEREST

The authors have no conflict of financial or non-financial interests to disclose.

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DATA AVAILABILITY

The database generated with the results reported in this study is not published or publicly available. However, the database is available upon request to the first author.

ETHICAL STATEMENT

Ethical clearance for this project was approved by the Ethics Committee for Technologies, Social Sciences and Humanities at Universidade Católica Portuguesa (CETCH-UCP, Portugal).

APPENDIX 1. PATTERN MATRIX LOADINGS FOR PRINCIPAL AXIS FACTORING (PAF) WITH OBLIQUE ROTATION OF THE PSS-10, ERQ, AND RDEES SCALES.

Number and name of item	Mean (*SD*)	h^2	Factor loadings
Perceived Stress Scale (PSS); *n* = 82			**F1**
8. How often have you felt that you were on top of things? (R)	1.55 (0.83)	0.79	0.85
10. How often have you felt difficulties were piling up so high that you could not overcome them?	1.40 (1.00)	0.68	0.83
2. How often have you felt that you were unable to control the important things in your life?	1.67 (1.10)	0.66	0.80
9. How often have you been angered because of things that were outside of your control?	1.72 (1.07)	0.63	0.79
3. How often have you felt nervous and 'stressed'?	2.20 (1.02)	0.62	0.77
1. How often have you been upset because of something that happened unexpectedly?	2.24 (1.00)	0.66	0.73
5. How often have you felt that things were going your way? (R)	1.61 (0.86)	0.56	0.72
6. How often have you found that you could not cope with all the things that you had to do?	1.59 (1.04)	0.47	0.67
4. How often have you felt confident about your ability to handle your personal problems? (R)	1.21 (0.84)	0.52	0.63
7. How often have you been able to control irritations in your life? (R)	1.38 (0.86)	0.32	0.55
Cronbach's Alpha			0.92

Emotion Regulation Questionnaire (ERQ); *n* = 97	**Mean (SD)**	h^2	**F1**	**F2**
7. When I want to feel more positive emotion, I change the way I'm thinking about the situation.	4.42 (1.77)	0.82	**0.94**	−0.14
10. When I want to feel less negative emotion, I change the way I'm thinking about the situation.	4.23 (1.66)	0.61	**0.75**	0.08
3. When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.	4.65 (1.83)	0.42	**0.61**	0.10
8. I control my emotions by changing the way I think about the situation I'm in.	3.96 (1.62)	0.37	**0.59**	0.07
1. When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.	4.66 (1.91)	0.29	**0.55**	−0.06
5. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	4.46 (1.73)	0.21	**0.46**	0.00
6. I control my emotions by not expressing them.	4.15 (1.85)	0.64	−0.01	**0.80**
4. When I am feeling positive emotions, I am careful not to express them.	3.33 (1.78)	0.48	0.06	**0.67**
9. When I am feeling negative emotions, I make sure not to express them.	4.29 (1.86)	0.48	0.20	**0.61**
2. I keep my emotions to myself.	4.52 (1.80)	0.29	−0.10	**0.56**
Cronbach's Alpha			0.81	0.77

Range and Differentiation Emotional Experience Scale (RDEES); *n* = 82	**Mean (SD)**	h^2	**F1**	**F2**
10. If emotions are viewed as colours, I can notice even small variations within one kind of colour (emotion).	4.10 (1.18)	0.83	**0.95**	−0.02
14. I am good at distinguishing subtle differences in the meaning of closely related emotion words.	4.12 (1.20)	0.74	**0.67**	0.23
12. I am aware of the subtle differences between feelings I have.	3.39 (1.46)	0.65	**0.61**	−0.15
6. I tend to draw fine distinctions between similar feelings (e.g. depressed and blue; annoyed and irritated).	4.11 (1.41)	0.66	**0.52**	−0.34
4. Each emotion has a very distinct and unique meaning to me.	4.45 (1.34)	0.45	**0.50**	−0.19
8. I am aware that each emotion has a completely different meaning.	4.49 (1.42)	0.77	**0.49**	−0.60
13. I tend to experience a broad range of different feelings.	4.02 (1.38)	0.76	0.27	**−0.31**
7. I experience a wide range of emotions.	5.23 (1.18)	0.61	−0.00	**−0.64**
3. I have experienced a wide range of emotions throughout my life.	4.29 (1.48)	0.57	0.15	**−0.67**
Cronbach's Alpha			0.89	0.80

Reverse Score (R); Factor (F); Communalities (h^2). The factor loadings respective to each factor of the scale are depicted by column, and values respective to each factor loading are signaled in boldface in ERQ and RDEES questionnaires. Cross-loadings larger than 0.30 are underlined. Extraction method: Common factor analysis – Principal Axis Factoring (PAF). Although not depicted, Maximum Likelihood (ML) was also used for CFA purposes. Rotation method: Oblique. ERQ – two and three factors were extracted; RDEES – two up to five factors were extracted. For full item-level factor structures and zero-order correlations, see Supplementary Tables S1 and S2.

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