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Relationship between the Big Five personality traits and PTSD among French police officers

Liens entre les cinq grands facteurs de personnalité et le SSPT chez des policiers Français

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1 Personality and PTSD symptoms in police
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4 **officers**
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7 *Liens entre les cinq grands facteurs de personnalité et le TSPT chez des policiers Français*
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46 **Conflicts of interest:** none

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49 public, commercial, or not-for-profit sectors.
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Abstract

Introduction: Post-traumatic stress disorder (PTSD) is rare among police officers, but the symptoms of PTSD are not. Personality traits can be a contributing factor of stress disorders. Based on the Big Five personality traits, three personality profiles can be identified: Resilient, Overcontrolled, and Undercontrolled. Resilient people are characterized by high emotional stability (low Neuroticism), high social skills and self-confidence. Overcontrollers have higher scores on Neuroticism and they tend to internalize their negative emotions. Undercontrollers are characterized by low Conscientiousness (impulsivity), a tendency toward social withdrawal and low self-esteem.

Objective: The aim of this study was to examine the role of personality traits and profiles in the emergence of PTSD symptoms among French police officers.

Method: Participants were French national police officers ($N=100$, $M = 32.9$ years, $SD = 9.8$, 19-57) who completed the Posttraumatic Stress Disorder Checklist Scale (PCLS) and the Big Five Inventory (BFI).

Results: Results revealed the three expected personality profiles: Resilients ($n=31$), Overcontrollers ($n=43$) and Undercontrollers ($n=19$). The Resilients presented with the fewest PTSD symptoms and the Undercontrollers with the most (particularly Reexperiencing). The latter also scored the highest on Neuroticism and the lowest on Extraversion and Agreeableness. Police officers with an Undercontrolled profile were also the oldest or those who had served the longest in the police force. Neuroticism and length of service were the two predictors of PTSD symptoms for Reexperiencing and Avoidance.

Conclusion: This study demonstrates the contribution of each personality trait and length of service to PTSD symptoms in French police officers.

Keywords: Posttraumatic stress symptoms; Big Five personality factors; Personality profile; Work-related stress; Police personnel.

Résumé

Introduction : Le trouble de stress post-traumatique (TSPT) est rare parmi les policiers, mais les symptômes ne le sont pas. Les traits de personnalité peuvent être un facteur médiateur des troubles liés au stress. Ils permettent habituellement d'identifier trois profils de personnalité : les « résilients » caractérisés par une forte stabilité émotionnelle, des compétences sociales et une confiance en soi élevées ; les « sur-contrôlés » qui ont des scores élevés de Névrosisme et une tendance à internaliser leurs émotions négatives et des « sous-contrôlés » avec un faible Caractère consciencieux (impulsivité), une tendance à l'isolement social et une faible estime de soi.

Objectif : L'objectif de cette étude était d'examiner le rôle de la personnalité dans l'apparition de symptômes du TSPT chez les policiers français.

Méthode : Les participants étaient des policiers français ($N=100$, $M = 32,9$ ans, $ET = 9,8$, 19-57) qui ont complété l'échelle de l'état de stress post-traumatique (PCLS) et l'inventaire des cinq grands facteurs de personnalité (BFI).

Résultats : Les résultats ont retrouvé les trois profils de personnalité attendus : « résilients » ($n=31$), « sur-contrôlés » ($n=43$) et « sous-contrôlés » ($n=19$). Les premiers présentaient le moins de symptômes de TSPT et les derniers le plus (en particulier la répétition ou intrusion). Ils avaient également les scores les plus élevés de Névrosisme et les plus bas d'Extraversion et d'Agréabilité. Ces policiers étaient aussi les plus âgés ou ceux qui avaient servi le plus longtemps dans la police. Le Névrosisme et la durée du service étaient les deux facteurs prédictifs des symptômes de TSPT pour la répétition et l'évitement.

Conclusion : Cette étude met en évidence la contribution de chaque trait de personnalité et durée de service pour les symptômes de TSPT chez les policiers français.

Mots-clés: Symptômes de stress post-traumatique ; Cinq grands facteurs de personnalité ; Profil de personnalité ; Stress lié au travail ; Police.

Relationship between the Big Five personality traits and PTSD among French police officers

1. Introduction

Several studies have shown that police work is particularly stressful (e.g. Aytac, 2015; Lau, Hem, Berg, Ekeberg, & Torgersen, 2006). Stress is related both to critical events, which are rare, and to everyday working conditions and the way that police officers cope with the pressures they face. Exposure to critical events (sexual trauma and combat trauma) is more predictive of posttraumatic stress disorder (PTSD) than other trauma types (Habersaat, Geiger, Abdellaoui, & Wolf, 2015; Jakob, Lamp, Rauch, Smith, & Buchholz, 2017). About 4.5% to 9% of police officers may suffer from full PTSD (Berger et al., 2012; Maia et al., 2007), but nearly 15-16% suffer from partial PTSD (Maia et al., 2007; Marmar et al., 2006). Work stressors and managing the job can cause other mood disorders in police officers, such as burnout (Kula, 2017; Lau et al., 2006), which are also underpinned by individual vulnerability factors (El Hage, Powell, & Surguladze, 2009). Understanding the protective factors against developing PTSD symptoms or other stress-related disorders is a major public health priority, and yet there have been few studies on protective or aggravating factors (Ellrich & Baier, 2015).

The Big Five personality model (Five-Factor Model or FFM) is the most consensual approach to personality assessment. It proposes five main dimensions of personality, broadly defined as Extraversion *vs.* Introversion, Agreeableness *vs.* Antagonism, Conscientiousness or Control *vs.* Impulsivity, Neuroticism *vs.* Emotional Stability, and Openness to New Experience/Intellect *vs.* Closed-mindedness (John, Naumann, & Soto, 2008; John & Srivastava, 1999). Extraverted people are outgoing, sociable with positive emotionality, talkative, energetic, assertive, and excitement seeking. Agreeable individuals promote

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239 prosocial and communal orientation toward others, they are cooperative, friendly, considerate
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241 or empathic, generous, trustful, and kind. Conscientious individuals facilitate goal-directed
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243 and planned behavior, they are work-oriented, responsible, attentive, careful, dependable,
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245 persistent, orderly, and impulse controlled. Neuroticism is associated with anxiety and
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247 instability. Neurotic individuals are moody, angry, easily frustrated, lacking in confidence,
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249 insecure in relationships, and sometimes anti-social. Individuals high in Openness are
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251 imaginative, curious, creative, complex and subtle, with artistic values, unusual ideas, and
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253 varied experiences. They are also quick to learn, clever, insightful, and independent-minded
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255 (Caspi, Roberts, & Shiner, 2005; John et al., 2008).
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259 To understand and prevent mood disorders among police officers, it is important to
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261 gain a deeper insight into personality traits that may be linked to PTSD symptoms. Police
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263 officers probably share common personality traits (Lau et al., 2006; Lorr & Strack, 1994),
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265 although some authors doubt the idea of a single profile (Wagner, 2005). The personality
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267 profile of police officers is likely to be characterized by low scores on Neuroticism (i.e.,
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269 emotionally secure), high scores on Extraversion (i.e., more assertive and self-confident), high
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271 scores on Conscientiousness (i.e., with a strong pattern of self-discipline or sense of control),
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273 and high scores on Agreeableness (i.e., friendly, sociable and gregarious) (e.g. Lau et al.,
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275 2006; Lorr & Strack, 1994; Wearing & Hart, 1996). This suggests the existence of a “Rescue
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277 Personality” of police officers and firefighters (Mitchell & Bray, 1990). Similar results have
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279 been found with other personality assessment tools (e.g. Eysenck: highly extraverted,
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281 venturesome and impulsive, but conforming, Gudjonsson & Adlam, 1983).
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285 Obviously, personality factors could represent a mediating factor between
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287 environmental stressors and mental health. For instance, several studies highlighted the role of
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289 Neuroticism (low Emotional stability) in perceived stress levels and stress reactivity (e.g.
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291 Garbarino, Chiorri, & Magnavita, 2014; Heinrichs et al., 2005; Jakšić, Brajković, Ivezić,
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Topić, & Jakovljević, 2012; Vollrath, 2001; Yuan et al., 2011). Neuroticism fosters the subjective experience of negative emotions of events. By contrast, Extraversion and Agreeableness are both related to more positive feelings, and better adaptation to stressful work (e.g. Garbarino et al., 2014; Jakšić et al., 2012; Skomorovsky, 2013).

Three personality profiles were described by Block (1971) using the Q-Sort Method for personality assessment: Resilients, Overcontrollers, and Undercontrollers. These profiles were consistent and stable over time. Various subsequent studies on children or adults found similar results. Subsequently, they were also found using the Big Five personality traits (e.g. Asendorpf, Borkenau, Ostendorf, & Van Aken, 2001; Asendorpf & van Aken, 1999; Boehm, Asendorpf, & Avia, 2002; Robins, John, Caspi, Moffitt, & Stouthamer-Loeber, 1996). Across studies, Resilients obtain the most favorable descriptions on all five scales (high emotional stability and high scores in the other four personality traits). They demonstrate high social skills and self-confidence. They do not have mental disorders, and they succeed academically and socially. Overcontrollers score higher on Neuroticism than Resilients, associated with high Agreeableness and low Extraversion. They share some of the features of Resilients, but tend to internalize their problems and negative emotions. Undercontrollers are characterized by low Conscientiousness (impulsivity) and low Agreeableness, with a tendency toward social withdrawal and low self-esteem. They tend to fail academically and socially and have more emotional and behavioral problems.

Personality traits can thus constitute protective factors against stress and mood disorders, or, on the contrary, they can increase susceptibility to psychic morbidity and anxiety disorders. The aim of this study was to examine the role of personality traits and profiles in the emergence of PTSD symptoms among police officers. We expected to observe that police officers with Resilient characteristics would show the fewest PTSD symptoms and those with features of Undercontrollers would show the most.

2. Material and methods

2.1 Participants and procedure

Participants were recruited in a French national police training center. All the police officers who were contacted agreed to participate in the study. After they had been informed of the aims of the study, they gave their informed consent, and completed the paper self-report questionnaire anonymously. Clear and precise instructions were given, and the importance of giving honest answers was stressed. No incentive was provided. This study complies with the Code of Ethics of the World Medical Association (Declaration of Helsinki).

Our sample comprised 100 French national police officers ($M = 32.9$ years, $SD = 9.8$, 19-57), including 28 women (27.7%); 58 (58%) were patrolmen (*gardiens de la paix*) or judicial police officers (*officiers de police judiciaire*), 41 (41%) were auxiliary police officers, and 1 (1%) was a forensic technician (*technicien de la police scientifique*). Participants were selected consecutively for inclusion in our sample, in close contact with the police districts in the 'Centre-Val de Loire' Region (France). Average length of service in the police force was 10.9 years ($SD = 9.9$, 0-34), 12.2 years ($SD = 9.2$, 0-34) for men and 7.7 years ($SD = 9.3$, 0-30) for women. The median was respectively 10.0, 12.0, and 2.5 years. Eight participants were excluded due to incomplete questionnaires.

2.2 Instruments

PCLS. The Posttraumatic Stress Disorder Checklist Scale (Ventureyra, Yao, Cottraux, Note, & De Mey-Guillard, 2002; Weathers, Litz, Herman, Huska, & Keane, 1993) is a brief and practical self-report assessment of the severity of PTSD-related symptoms of intrusion/reexperiencing, avoidance/numbing, and hyperarousal (DSM-IV symptom criteria) in the past month. The 17 items are rated on a 5-point scale (from 1 - not at all - to 5 -

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416 extremely); total score is the sum of all 17 items. Participants report the level of distress
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418 experienced for each item. The total score can be divided into 3 sub-scores: reexperiencing
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420 (items 1–5), avoidance (items 6–12), and hyperarousal (items 13–17). Scores range from 17 to
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422 85, with higher scores indicating greater severity of PTSD symptoms. A cutoff score of 44 has
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424 demonstrated high diagnostic accuracy for PTSD (.97), with good specificity (.87) and
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426 sensitivity (.94) (Ventureyra et al., 2002).
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429 **BFI.** The Big Five Inventory (John, Donahue, & Kentle, 1991; Plaisant, Srivastava,
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431 Mendelsohn, Debray, & John, 2005) is a self-administered questionnaire containing 45 items
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433 for five dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism and
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435 Openness to experience. Participants answer on a Likert scale ranging from 1 (strongly
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437 disagree) to 5 (strongly agree). The BFI has good psychometric properties.
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440 **2.3 Data analysis**

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443 Internal consistency of the dimensions of the Big Five Inventory, as assessed by
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445 Cronbach's alpha coefficient, was $> .70$. We conducted a k-means cluster analysis, which
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447 allocates each case to the cluster with the nearest center point. To compare clusters
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449 (personality prototypes), we used analysis of variance (ANOVA), with post hoc comparisons
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451 (Bonferroni test) to assess the differences between groups (group interactions). Next, we
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453 calculated Bravais Pearson's correlations to evaluate the relationship between PTSD
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455 symptoms and personality traits. Next, we conducted a multiple regression analysis to
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457 determine the relative weights of length of service and Big Five personality traits on the
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459 PTSD symptoms. Finally, Structural Equation Modeling (SEM) was performed using the
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461 maximum likelihood estimation. In this study, selected values were greater than 0.90 for the
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463 comparative fit index (CFI) and the Normed Fit Index (NFI), less than 0.08 for the root mean-
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465 square error of approximation (RMSEA), and less than 3 for the χ^2/df (Arbuckle & Wothke,
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475 2003; Byrne, 2010; Hu & Bentler, 1999). An alpha level of less than 5% was considered
476 statistically significant. Statistical analyses were performed with Statistica® and AMOS®.
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482 **3. Results**

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485 Descriptive statistics of PTSD symptoms and the BFI scores are provided in Table 1,
486 including Cronbach's alpha coefficient. Based on the cut-off score of 44 on the PCLS, 3
487 police officers (3.2%) had a very probable diagnosis of PTSD. Based on the broader cut-off
488 score of 34 on the PCLS, 12 police officers (12.9%) were affected by partial PTSD. Using a
489 diagnostic approach based on DSM-IV criteria, with at least 1 item reported for
490 Reexperiencing (with a score ≥ 3), associated with three or more items for Avoidance, and at
491 least 2 items for Hyperarousal, 4 police officers (4.3%) met the criteria for PTSD diagnosis.
492 These 4 police officers were male (M = 37.5 years, SD = 8.5, 27-47), had been working for a
493 long time in the police (M = 15.8 years, SD = 8.2, 8-27), and had high PTSD total severity
494 scores (M = 45.5, SD = 6.3, 39-54) (with high sub-scores for Reexperiencing (M = 14.0, SD =
495 3.9, 10-19), Avoidance (M = 16.2, SD = 1.3, 15-18), and Hyperarousal (M = 15.2, SD = 5.3,
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513 Please Insert Table 1 here
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516 Next, we conducted a k-means cluster analysis, which divided the police officers into
517 three clusters according to personality prototypes (Asendorpf et al., 2001; Block, 1971). BFI
518 scores yielded the three expected personality types: Resilients, Overcontrollers and
519 Undercontrollers (Figure 1). The Resilients had the most positive personality traits, with high
520 scores on Extraversion, Agreeableness, Conscientiousness, and Openness, and low scores on
521 Neuroticism (high emotional stability). The Overcontrollers had a similar but less positive
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534 profile, while the Undercontrollers had high scores on Neuroticism and low scores on
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536 Conscientiousness (impulsivity). The Resilients group ($n = 31$) comprised 58.1% men, young
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538 adults ($M = 27.5$ years, $SD = 7.9$, 20-57), with the shortest length of service in the police ($M =$
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540 5.2 , $SD = 6.5$ years, 2-30). The Overcontrollers group ($n = 43$) was composed predominantly
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542 of men (81.4%), young adults ($M = 33.0$ years, $SD = 9.6$, 19-52), with longer service ($M =$
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544 10.9 years, $SD = 9.0$, 0-31). The Undercontrollers group ($n = 19$) was composed of 73.7%
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546 men, who were older ($M = 38.3$ years, $SD = 8.9$, 20-51) and had spent the longest time in the
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548 police ($M = 16.9$ years, $SD = 8.6$, 1-32).
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557 Between these three groups, differences in the BFI scores were significant for all traits
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559 (Table 2). Post hoc comparisons (Bonferroni test) were performed to assess the differences
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561 between groups (group interactions). Next, we compared PTSD symptoms according to
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563 personality profile (Figure 2). These symptoms were greater in the Undercontrollers than in
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565 the Resilients and Overcontrollers. All differences between groups are shown in Table 3,
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567 including *Post hoc* comparisons (Bonferroni test).
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575 Undercontrollers had higher scores on Neuroticism, and lower scores on
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577 Conscientiousness and Agreeableness than Resilients and Overcontrollers. They also had
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579 more symptoms of PTSD (Reexperiencing, Avoidance, and Hyperarousal) than the other
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581 personality profiles. They were the oldest police officers, or those who had worked the
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583 longest in the police. The correlation between age and length of service was high ($.97$, p
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585 $<.001$). Therefore, we looked for links between PTSD symptoms (related to reexperiencing,
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avoidance, or hyperarousal), length of service, and personality traits. Table 4 shows correlations between PTSD symptoms and length of service (respectively .55, .41 and .26, $p < .001$).

Please Insert Table 4 here

Next, we carried out a step-by-step multiple regression analysis to determine the relative weights of length of service, Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness on the PTSD symptoms, starting with Reexperiencing. They explained 42% of the variance ($p < .001$), with length of service, which made up the first step, contributing 31% ($p < .001$), followed by Neuroticism bringing about 11% of additional variance ($p < .001$). We carried out the same procedure for Avoidance. The same independent variables explained 28% of the variance ($p < .001$), with Neuroticism accounting for 21% ($p < .001$) and length of service 7% ($p < .01$). Finally, we carried out the same procedure for Hyperarousal. Only Neuroticism explained more than 18% of the variance ($p < .001$). When we removed Neuroticism from the equation, Agreeableness emerged in part as a predictor for PTSD symptoms: for Reexperiencing, only length of service explained 30% of variance ($p < .001$); for Avoidance, Agreeableness brought 4% additional variance ($p < .05$) to the 17% explained by length of service ($p < .005$), and it was the only predictor for Hyperarousal, but explaining only 8% of the variance ($p < .005$).

We summarized these relations using a structural equation model (SEM). SEM provides a parsimonious and logical explanation of observed relationships for the measured variables. Relationships are shown in Figure 3.

Please Insert Figure 3 here

4. Discussion

The aim of our study was to identify which personality traits, and particularly which personality profile, were most likely to be associated with PTSD or PTSD symptoms. The results confirmed the three expected personality profiles: Resilients, Overcontrollers, and Undercontrollers. The Resilient group comprised 31 police officers, the Overcontrollers group 43, and the Undercontrollers group 19. The Resilients had the fewest PTSD symptoms and the Undercontrollers the most (particularly for Reexperiencing). Specifically, the Undercontrollers had the highest Neuroticism scores and the lowest Extraversion and Agreeableness scores (i.e. the most vulnerable personality profile). They were also the oldest or those who had served longest in the police. Correlational analysis showed that both length of service and personality traits were associated with PTSD symptoms. Neuroticism and length of service were the two predictors of Reexperiencing and Avoidance. While Agreeableness and Extraversion had negative correlations with PTSD symptoms (i.e., both, but particularly Agreeableness, are protective traits or associated with an absence of disorders), they were no longer significant when the police officers had high scores on Neuroticism.

Our results for personality profiles are in line with those in the literature. Resilients are more resistant to job stressors and do the best job (Garbarino et al., 2014; Jakšić et al., 2012; Lau et al., 2006). Personality traits can moderate perceived stress levels. The proportion of police officers in our sample with full PTSD was relatively low compared to the findings of other authors (Maia et al., 2007; Marmar et al., 2006), but participants were not part of an elite unit and they had not experienced a traumatic event such as 9/11 in New York. In France, in general, little consideration is given to the traumatic events that occur during police

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711 work. Officers rarely benefit from debriefing with structured psychological support. On the
712 whole, they do not talk about any distress they may have suffered, and their supervisors also
713 tend to ignore it. Older police officers in the lowest ranks are often those with the lowest
714 education level and the least training. Consequently, if these police officers remain isolated,
715 they are more at risk of developing psychic morbidity. With increasing length of service,
716 police officers accumulate experiences of violent situations or the distress of others. They are
717 more vulnerable to the negative effects of acute or chronic stress. Stress can be caused both by
718 critical events and by daily stressors. Older police officers report more job pressure and fewer
719 work injuries (Berg, Hem, Lau, Håseth, & Ekeberg, 2005). The protective role of personality
720 traits changes over time. Personality traits tend to change in a stressful environment and to be
721 more associated with anxiety and psychological distress. This may call into question the idea
722 that young police officers are inevitably more prone to post-trauma reactions (Hodgins,
723 Creamer, & Bell, 2001). It also suggests that police officers should be selected on personality
724 criteria in order to ensure their capacity to adapt to their work and to cope with the stress that
725 it involves.

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The main limitations of this study are the size of the sample, the fact that participants were still in training, and the use of self-administered questionnaires. The results should be interpreted with caution, even though the participants were from a regional training center for all categories of police officers.

This study highlights the role of personality and length of service in coping with stress and in the occurrence of PTSD symptoms in French police officers, and particularly the role of neuroticism (low emotional stability). It suggests the relevance of screening young recruits, giving precedence to those presenting with personality traits that could have a protective role (high Extraversion, high Agreeableness, high Conscientiousness or low impulsivity). It is important to recognize the stress experienced by police officers in their work and to develop

768 Personality and PTSD symptoms in police

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770 strategies to help them cope with it throughout their career (Pole, Kulkarni, Bernstein, &
771 Kaufmann, 2006), such as developing social relationships and promoting peer support during
772 and after stressful situations (Bowling, Eschleman, & Wang, 2010). More specific support
773 should also be given to police officers who show the characteristics of Undercontrollers
774 because of their greater risk of developing PTSD symptoms. In sum, this research work
775 should be replicated with a larger sample in order to gain a clearer view of the issue and
776 perhaps to adapt actions to promote resilient functioning in a population that is often subject
777 to post-traumatic stress.
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792 We would like to thank the Regional Training Center of police officers.
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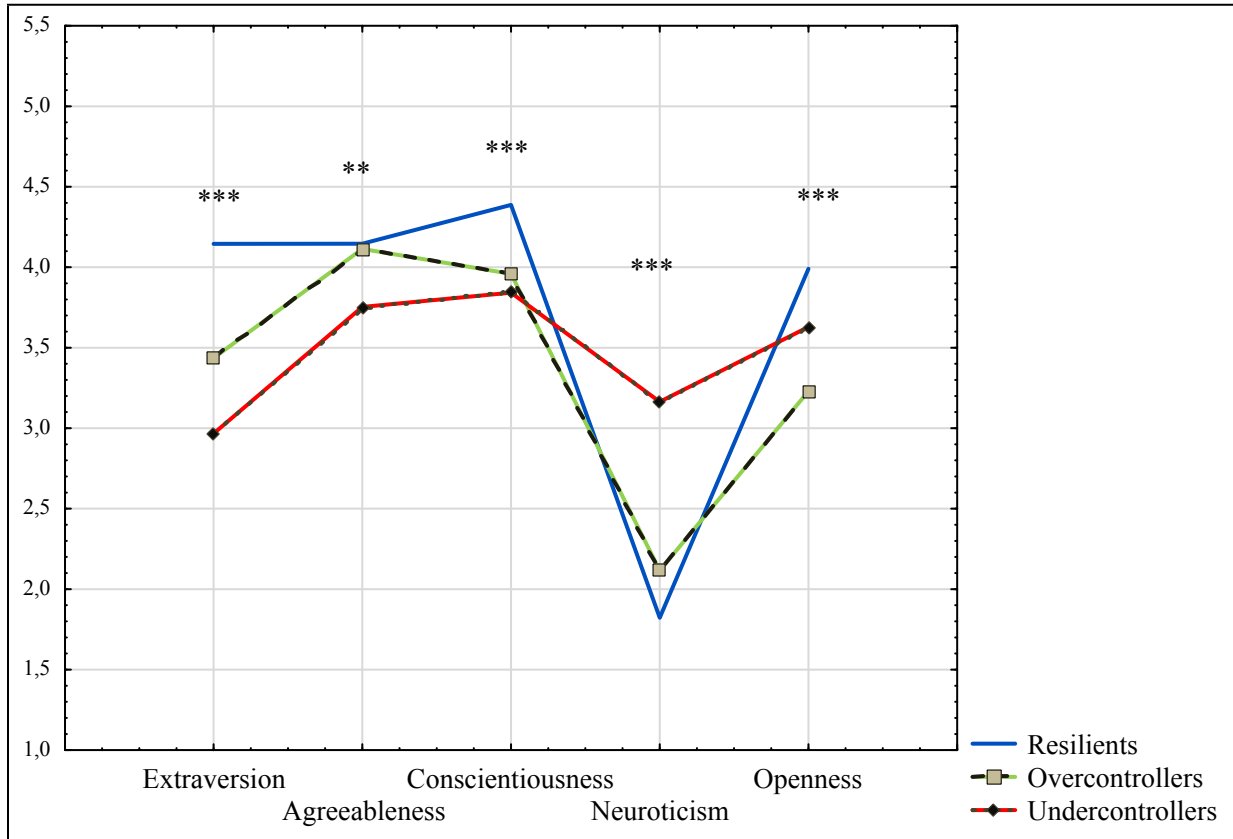
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Figure 1. Resilient, overcontrolled and undercontrolled personality profiles.



*: $p < .05$; **: $p < .01$ and ***: $p < .001$

Figure 2. PTSD symptoms (means and standard deviations) according to personality profiles (Resilient, overcontrolled and undercontrolled).

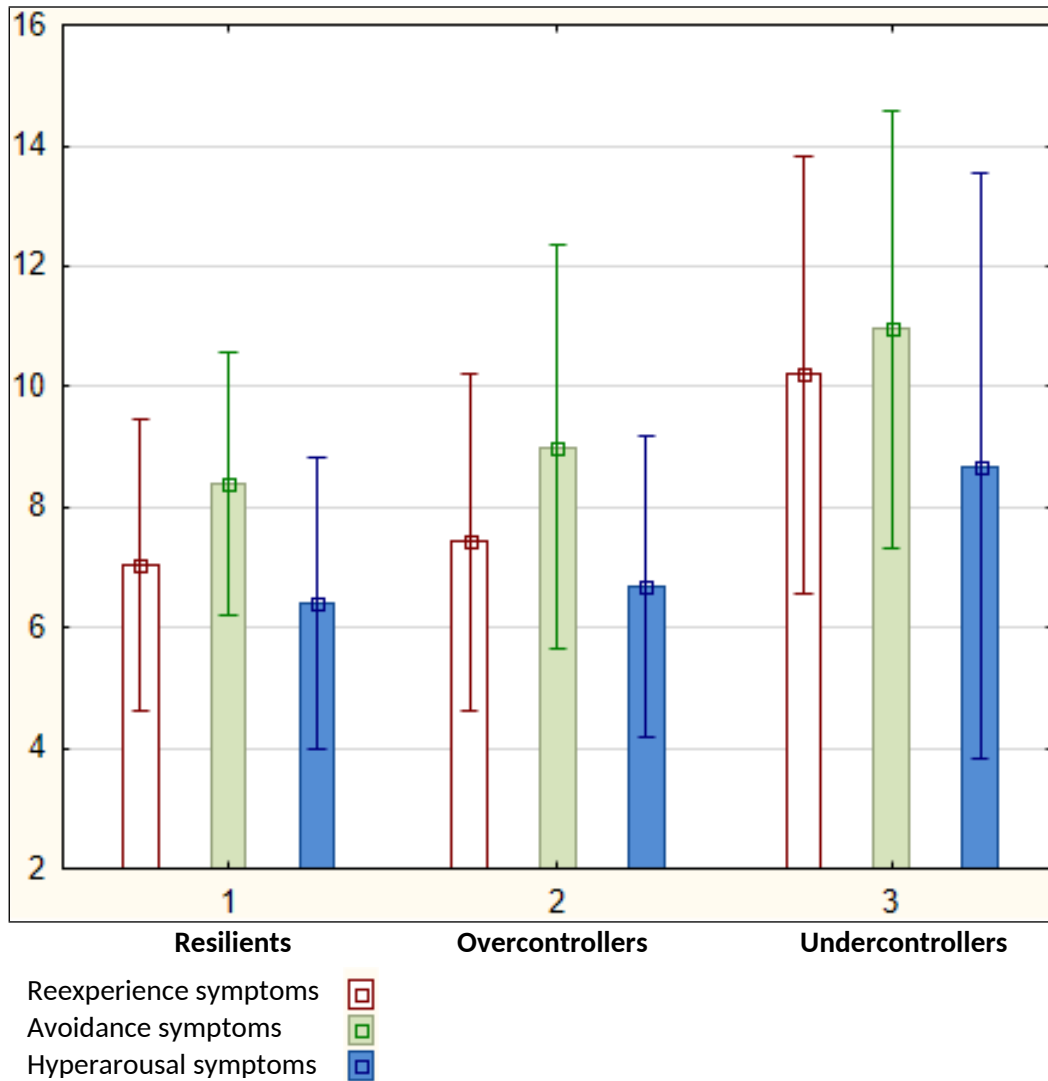
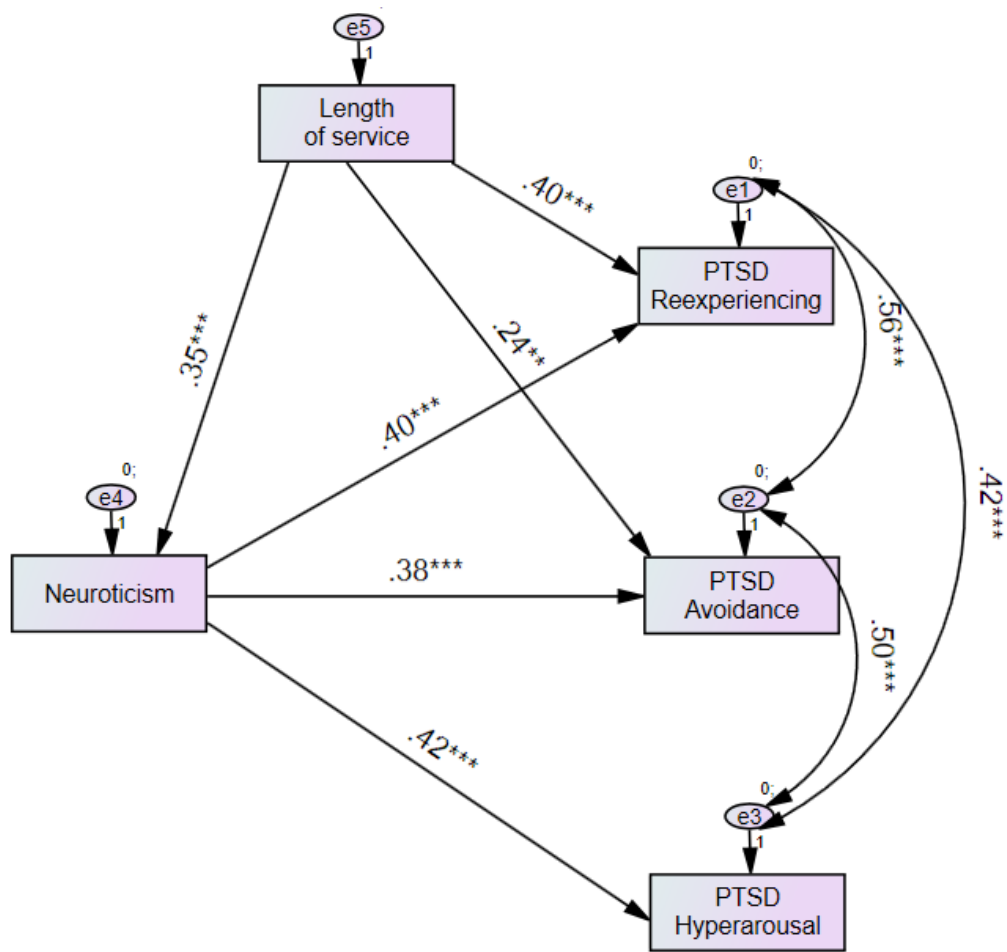


Figure 3. Impact of personality traits and length of service on PTSD symptoms.



*: $p < .05$; **: $p < .01$; ***: $p < .001$

$\chi^2 = 1.60$, $df = 1$

$\chi^2/df = .87$

$p < .21$

CFI = 99.6

NFI = 99.1

RMSEA = .077

Table 1. Descriptive statistics of PTSD symptoms and personality traits.

	Mean [CI 95%]	Median	Minimum	Maximum	Q1	Q3	SD	<i>Cronbach's coefficient</i>
PCLS								
Reexperiencing score	7.9 [7.2-8.5]	7	5	19	5	10	3.1	.76
Avoidance score	9.2 [8.5-9.8]	8	7	24	7	10	3.2	.69
Hyperarousal score	7.0 [6.4-7.7]	5	5	23	5	8	3.2	.85
Total score	24.1 [22.4-25.7]	21	17	54	18	27	8.1	.88
BFI								
Extraversion	3.6 [3.4-3.7]	3.6	1.9	4.9	3.1	4.0	.7	.84
Agreeableness	4.0 [4.0-4.1]	4.1	2.9	5.0	3.8	4.3	.4	.75
Conscientiousness	4.1 [4.0-4.2]	4.1	2.4	5.0	3.8	4.3	.5	.80
Neuroticism	2.2 [2.1-2.4]	2.1	1.1	4.4	1.7	2.6	.7	.83
Openness	3.6 [3.4-3.7]	3.5	2.2	4.8	3.2	4.0	.5	.80

BFI: Big Five Inventory; PCLS: Posttraumatic Stress Disorder Checklist Scale; CI: Confidence interval; Q1: 1st Quartile; Q3: 3rd Quartile

Table 2. Resilient, overcontrolled and undercontrolled personality profiles (means, standard deviations and inter-group comparisons)

	Resilients (Cl.1)	Overcontrollers (Cl. 2)	Undercontrollers (Cl. 3)	F	<i>p</i>	Bonferroni post-hoc test
Extraversion	4.14 (.44)	3.28 (.51)	3.47 (.76)		***	Cl. 3 > Cl. 1 ** Cl. 3 > Cl. 2 (ns) Cl. 2 > Cl. 1 ***
Agreeableness	4.20 (.40)	4.08 (.33)	3.41 (.29)	6.53	**	Cl. 3 > Cl. 1 *** Cl. 3 > Cl. 2 *** Cl. 2 > Cl. 1 (ns)
Conscientiousness	4.43 (.31)	3.93 (.43)	3.77 (.60)		***	Cl. 3 > Cl. 1 *** Cl. 3 > Cl. 2 (ns) Cl. 2 > Cl. 1 ***
Neuroticism	1.71 (.43)	2.31 (.42)	3.45 (.61)		***	Cl. 3 > Cl. 1 *** Cl. 3 > Cl. 2 *** Cl. 2 > Cl. 1 ***
Openness	3.80 (.52)	3.33 (.42)	3.88 (.67)		***	Cl. 3 > Cl. 1 (ns) Cl. 3 > Cl. 2 ** Cl. 2 > Cl. 1 ***

*: $p < .05$; **: $p < .01$ and ***: $p < .001$

Table 3. PTSD symptom clusters (means, standard deviations and inter-group comparisons) in the three personality prototypes

	Resilients (Cl.1)	Overcontrollers (Cl. 2)	Undercontrollers (Cl. 3)	F	<i>p</i>	Bonferroni post-hoc test
Reexperiencing	7.03 (2.42)	7.41 (2.79)	10.21 (3.63)		***	Cl. 3 > Cl. 1 *** Cl. 3 > Cl. 2 ** Cl. 2 > Cl. 1 (ns)
Avoidance	8.39 (2.17)	9.00 (3.39)	10.95 (3.64)	4.26	*	Cl. 3 > Cl. 1 * Cl. 3 > Cl. 2 (ns) Cl. 2 > Cl. 1 (ns)
Hyperarousal	6.42 (2.42)	6.70 (2.49)	8.68 (4.84)	3.58	*	Cl. 3 > Cl. 1 * Cl. 3 > Cl. 2 (ns) Cl. 2 > Cl. 1 (ns)

*: $p < .05$; **: $p < .01$ and ***: $p < .001$

Table 4. Correlations between Big Five personality traits and PTSD symptoms.

	BFI personality traits					PTSD clusters		
	E	A	C	N	O	Reexperience	Avoidance	Hyperarousal
Length of service	-.36***	-.26*	-.22*	.34***	-.03	.55***	.41***	.26*
Extraversion	1	.11	.26*	-.31**	.15	-.20	-.27**	-.20
Agreeableness		1	.30**	-.36***	-.05	-.22*	-.31**	-.29**
Conscientiousness			1	-.34***	.34**	-.08	-.15	-.19
Neuroticism				1	-.02	.50***	.46***	.43***
Openness					1	.13	.09	.07
Reexperience						1	.70***	***
Avoidance							1	.61***
Hyperarousal								1

*E: Extraversion; A: Agreeableness; C: Conscientiousness; N: Neuroticism; O: Openness; *: $p < .05$; **: $p < .01$; ***: $p < .001$*