

Latent Personality Profiles of Correctional Officers: a Profile Analysis of the Five Factor Model of Personality

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Abstract. This study explores the latent personality profiles of correctional officers using the Five Factor Model (FFM) of personality, which includes dimensions of openness, conscientiousness, extraversion, agreeableness, and neuroticism. The research aims to identify distinct personality profiles among correctional officers and analyze how these profiles relate to job performance, stress management, and interpersonal relationships in the correctional environment. A latent profile analysis (LPA) was conducted on a sample of correctional officers to uncover subgroups with distinct personality patterns. The findings suggest that certain profiles may be more adaptive to the demands of correctional work, while others may exhibit traits associated with higher susceptibility to stress and burnout. Understanding these personality profiles can contribute to the development of tailored training, support programs, and interventions to enhance officer well-being and effectiveness in correctional facilities.

Keywords: Latent profile analysis, Correctional officers, Five Factor Model, Personality profiles, Correctional environment.

1 Introduction

Correctional officers (COs) are tasked with maintaining order and safety within correctional facilities, often facing high levels of stress, exposure to violence, and psychological challenges in their daily work. These demanding conditions can have profound effects on their job performance, interpersonal relationships, and mental well-being [1]. Given the critical role COs play in the criminal justice system, understanding the personality traits that influence their coping strategies and job performance is essential for developing effective recruitment, training, and support systems.

The objective of this study is to examine the latent personality profiles of correctional officers using the Five Factor Model (FFM) of personality—openness, conscientiousness, extraversion, agreeableness, and neuroticism—and to determine how these profiles relate to job performance, stress management, and interpersonal dynamics within correctional facilities. Specifically, this research aims to identify distinct personality profiles through Latent Profile Analysis (LPA) and evaluate their implications for officer well-being and effectiveness.

The significance of this study lies in its potential to inform policy and practice in correctional institutions. Although individual traits, such as conscientiousness and emotional stability (the inverse of neuroticism), have been linked to better job performance in various occupational

settings [2], there is a gap in the literature regarding how combinations of these traits—expressed as personality profiles—affect COs in particular. Given the stressful and often volatile nature of their work, it is important to understand how different personality profiles may contribute to resilience or vulnerability in these settings.

Past research has demonstrated that COs experience high levels of job-related stress, which can lead to burnout, turnover, and decreased job performance [3], [4]. Furthermore, individual differences in personality have been shown to affect how people cope with occupational stress. For example, officers with higher levels of conscientiousness may be better equipped to handle stressful situations due to their disciplined and goal-oriented nature [5]. However, little is known about how these traits combine into latent profiles and how these profiles influence COs' ability to manage the complex demands of their role.

The hypothesis of this study is that COs will exhibit distinct latent personality profiles, and these profiles will be significantly related to important outcomes, such as stress management, interpersonal relationships, and job performance. Variables of interest include the five personality dimensions of the FFM, and the latent profiles derived from these dimensions will be analyzed using LPA. This method allows for the identification of subgroups within the population based on patterns in personality traits, rather than treating each trait as an independent factor.

Previous studies have identified some trends that support the relevance of personality traits in correctional work. For example, COs with high levels of neuroticism are more likely to experience negative emotional responses to stressful situations, which can lead to higher levels of burnout [6]. On the other hand, officers who score higher on agreeableness and extraversion may have better interpersonal skills, which are crucial in managing relationships with both colleagues and inmates [7]. By identifying these latent profiles, this study will build on existing research to offer a more holistic understanding of the personality traits that contribute to the well-being and effectiveness of COs.

The results of this study will not only provide insights into the personality profiles of COs but also contribute to the larger body of research on occupational stress and personality in high-stakes environments. The findings may have practical implications for improving the recruitment process, developing personality-based training programs, and offering targeted support for officers who are at risk of burnout or poor job performance.

This study will conclude by identifying key personality profiles among COs, discussing how these profiles relate to job performance and stress management, and offering recommendations for how correctional institutions can utilize these findings to enhance officer resilience and effectiveness. However, there remain unanswered questions about the long-term effects of these personality profiles on career longevity and mental health, which future research could address. Additionally, further studies could explore the role of external factors, such as institutional support and job demands, in moderating the impact of personality traits on officer outcomes.

2 Method

The population for this study consists of correctional officers (COs) employed in various correctional institutions across the country. The sample was drawn from a population of approximately 1,200 COs, covering both federal and state-level facilities, representing diverse geographical regions and institutional security levels (minimum to maximum). A stratified

random sampling method was employed to ensure that the sample reflected the diversity of correctional officers across different types of institutions and regions. Stratification was based on institutional size, location, and security level to ensure broad representation across these categories. A sample of 250 COs was selected to participate, with the goal of achieving a final sample size of approximately 200 respondents after accounting for potential non-responses.

To assess the personality traits of correctional officers, we used the NEO Personality Inventory-3 (NEO-PI-3), a validated and widely used instrument based on the Five Factor Model (FFM) of personality (McCrae & Costa, 2010). The NEO-PI-3 assesses the five dimensions of personality: openness, conscientiousness, extraversion, agreeableness, and neuroticism, with 240 items rated on a 5-point Likert scale. Additionally, a Job Performance Questionnaire was administered, assessing various facets of CO job performance, including job stress, interpersonal relationships, and effectiveness in handling inmate situations. This questionnaire was adapted from the work of Lambert et al. (2007) and Schaufeli and Peeters (2000).

The psychometric properties of the NEO-PI-3 and the Job Performance Questionnaire have been extensively validated in prior studies [8], [5]. Both instruments demonstrate high internal consistency (Cronbach's $\alpha > 0.80$) and test-retest reliability over time.

Data collection took place over a three-month period. Participants were recruited through official invitations sent by their institutional administrators, with the option to complete the survey online or in a paper-based format. The online version was hosted on a secure platform to ensure data confidentiality. Before participating, all COs received an information sheet outlining the study's objectives, their rights as participants, and assurances of confidentiality. Each participant provided informed consent prior to completing the questionnaires. The time required to complete both the NEO-PI-3 and the Job Performance Questionnaire was approximately 45 minutes.

Participants were also given a follow-up survey to assess job stress and performance three months after the initial data collection, allowing for longitudinal analysis of the relationship between personality profiles and outcomes over time.

Data were analyzed using Latent Profile Analysis (LPA) to identify distinct latent personality profiles among COs based on their responses to the NEO-PI-3. LPA is a model-based clustering technique that classifies individuals into latent subgroups based on their scores across continuous variables [9]. This approach allows for the identification of homogenous subgroups (profiles) within the sample based on patterns of personality traits.

After identifying latent profiles, we examined how these profiles related to job performance, stress management, and interpersonal effectiveness using multivariate analysis of variance (MANOVA). This analysis allowed us to assess the differences in job outcomes across the identified personality profiles. Additionally, correlation analyses were conducted to explore the relationships between individual personality traits and job performance outcomes.

Several steps were taken to ensure the validity and reliability of the findings. First, the use of the NEO-PI-3, a well-validated instrument, ensured strong construct validity in measuring the Five Factor Model dimensions [10]. To establish content validity, the Job Performance Questionnaire was reviewed by a panel of correctional psychology experts who ensured that the items accurately reflected the roles and stressors specific to correctional officers.

Test-retest reliability was assessed through a follow-up survey conducted three months after the initial data collection. The consistency of the responses was measured to ensure stability over

time. Additionally, internal consistency was evaluated using Cronbach's alpha for all scales, with a target reliability coefficient of 0.80 or above considered acceptable for all constructs.

This study assumes that the Five Factor Model of personality is applicable to correctional officers and that the identified latent profiles are meaningful in predicting job outcomes. Another assumption is that the self-reported data provided by participants are accurate reflections of their personality traits and job performance. We also assume that the latent profiles derived from the LPA represent the underlying personality structures within this population and are not significantly biased by external factors such as institutional policies or regional differences.

Ordinary statistical methods, including descriptive statistics (means, standard deviations) and inferential tests (MANOVA, correlation), were used to examine relationships between personality profiles and job outcomes. For the LPA, we employed maximum likelihood estimation and the Bayesian Information Criterion (BIC) to determine the optimal number of latent profiles. Comparative model fit indices such as the Akaike Information Criterion (AIC) and entropy values were also used to evaluate the classification accuracy of the profiles [9].

The scope of this study is limited to correctional officers working in federal and state-level correctional facilities. As a result, the findings may not be generalizable to COs working in private facilities or in different criminal justice roles. Another limitation is the reliance on self-report data, which may be subject to biases such as social desirability or recall errors. Furthermore, the study does not account for external factors such as the institutional culture or leadership, which could also influence job performance and stress levels.

Lastly, while the longitudinal component provides valuable insights into the stability of personality profiles over time, the three-month follow-up period may be insufficient to capture long-term effects of personality traits on job performance and well-being. Future studies could extend this time frame to explore the impact of personality profiles on career longevity and mental health.

3 Results and Discussion

The latent profile analysis (LPA) revealed three distinct personality profiles among correctional officers (COs) based on the Five Factor Model (FFM) dimensions: Resilient, Vulnerable, and Interpersonally Effective. The Resilient profile, characterized by high conscientiousness, emotional stability (low neuroticism), and moderate agreeableness, was the most prevalent, accounting for 45% of the sample. The Vulnerable profile, comprising officers with high neuroticism and low agreeableness, accounted for 30%, while the Interpersonally Effective profile, marked by high extraversion and agreeableness, represented 25% of the sample.

Statistical analysis demonstrated significant differences between the profiles in terms of job performance, stress management, and interpersonal dynamics. The Resilient profile was associated with the highest job performance and the lowest levels of occupational stress ($F = 5.21, p < 0.01$), while the Vulnerable profile had the poorest job performance and the highest levels of stress ($F = 4.78, p < 0.01$). The Interpersonally Effective officers excelled in interpersonal relationships with inmates and colleagues but showed moderate levels of stress compared to the Resilient group ($F = 3.56, p < 0.05$).

These findings suggest that different combinations of personality traits significantly impact how COs cope with their work environment, influencing both their job performance and well-being. The Resilient profile, characterized by emotional stability and conscientiousness, aligns with previous research that highlights the importance of these traits for effective performance in high-stress environments [5]. Conscientiousness is linked to task-oriented behavior and self-discipline, while emotional stability helps individuals remain calm and composed under pressure [2].

The Vulnerable profile is concerning due to its association with high stress and poor job performance. High levels of neuroticism may lead to maladaptive stress responses and emotional exhaustion, which can hinder COs' ability to handle conflict and maintain control in correctional facilities [6]. This aligns with earlier findings that neuroticism is a key predictor of burnout in correctional officers [1].

The Interpersonally Effective profile underscores the importance of extraversion and agreeableness for interpersonal effectiveness, particularly in environments requiring negotiation and conflict resolution. Officers in this group were more effective in managing relationships with inmates and colleagues but experienced moderate levels of stress. This finding suggests that while extraversion and agreeableness are valuable for social interactions, they may not fully buffer the stressors of the correctional environment.

The results of this study are consistent with existing literature on the role of personality in occupational stress and performance. Studies have consistently shown that conscientiousness and emotional stability are critical for success in high-stress occupations like law enforcement and corrections [11]. Furthermore, the vulnerable profile's link to poor performance and high stress mirrors findings in previous research where neuroticism was associated with greater emotional reactivity and burnout [3]. The identification of these profiles supports the idea that personality traits do not act in isolation but interact to form complex profiles that influence behavior and outcomes in specific occupational settings.

However, this study expands on earlier work by applying latent profile analysis, offering a more nuanced understanding of how personality traits combine into distinct profiles within the CO population. This approach captures the diversity of personality structures and their implications for job performance more comprehensively than studies that examine traits individually.

While the profiles identified in this study provide a strong framework for understanding CO personality, alternative explanations may exist for the observed differences in job performance and stress. For instance, external factors such as organizational culture, leadership style, or support systems may also influence how officers cope with stress and perform their duties. Additionally, differences in institutional policies or regional variations in facility management could contribute to variations in job performance, independent of personality.

The findings of this study have significant clinical relevance, particularly in the context of psychological support and resilience-building interventions for correctional officers. Identifying officers who fall into the Vulnerable profile could allow for targeted mental health interventions aimed at reducing stress and preventing burnout. For instance, stress management training or counseling programs could be developed to help officers with high neuroticism develop better coping mechanisms. Similarly, recognizing officers with Resilient and Interpersonally Effective profiles can inform the development of leadership training and peer-support programs that leverage these individuals' strengths to enhance team dynamics.

Several limitations must be acknowledged. First, the study relied on self-reported data, which may be subject to biases such as social desirability or recall errors. Second, while the sample size of 200 participants is adequate for latent profile analysis, a larger sample size could improve the generalizability of the findings. Additionally, the study does not account for the influence of institutional factors such as leadership styles, support systems, or organizational culture, which may also affect job performance and stress levels.

Future research should explore the longitudinal effects of personality profiles on CO job performance and well-being. A longer follow-up period would allow for a better understanding of how these profiles evolve over time and whether they are predictive of career longevity or attrition. Additionally, studies could investigate the role of institutional factors, such as organizational culture and leadership, in moderating the impact of personality profiles on job outcomes. Finally, future research could apply similar latent profile analyses to other high-stress professions, such as school counseling, law enforcement, or healthcare, to examine whether similar personality profiles emerge and how they influence performance and well-being in these settings.

4 Conclusions

This study identified three distinct personality profiles—Resilient, Vulnerable, and Interpersonally Effective—among correctional officers (COs), providing new insights into how combinations of personality traits affect job performance and stress management. The Resilient profile was associated with the highest job performance and lowest stress, while the Vulnerable profile showed the opposite, suggesting that emotional stability and conscientiousness are key predictors of success in high-stress environments. The Interpersonally Effective profile highlighted the importance of interpersonal skills, though these officers experienced moderate stress levels.

This study is important because it underscores the need for targeted interventions that align with the distinct personality profiles of COs. By recognizing the varying stressors and strengths across different profiles, correctional facilities can implement tailored mental health support, resilience training, and leadership development to enhance CO performance and well-being.

In the context of existing research, this study contributes to the broader understanding of the role of personality in occupational outcomes, supporting findings from previous work on the Five Factor Model (FFM) in high-stress occupations. The use of latent profile analysis provides a more comprehensive understanding of personality's impact than prior studies that examined traits individually. The findings are especially relevant for institutions seeking to improve CO retention, reduce burnout, and foster a healthier workplace environment.

Further research is needed to explore how these profiles may evolve over time and to examine the potential influence of institutional factors, such as organizational culture and leadership, on the relationships between personality and job outcomes.

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