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## **New approaches to compare Police practice in Europe: an occupational health perspective**

### **1. Introduction**

Police work is a particular stressful occupation (McCarty, Zhao, & Garland, 1994). Police officers on their daily duties have not only to take care of themselves but also assure the safety of the public and still be able to keep their emotions and reactions under control. As a consequence of the demanding occupation, several physical and psychological health problems can occur, with impact on the welfare of officers and citizens. This exposure of police officers to potential stress sources over time has been associated with several problems (Kop, Euwema, & Schaufeli, 1999, Violanti & Paton, 2006), affecting not only behavioural (i.e., absenteeism, poorer interactions with the public, fatigue, attitude towards the use of violence; excessive drinking and smoking), but also physical (i.e., cardiovascular diseases, digestive problems), and psychological components (i.e., increased thoughts of suicide, anxiety, depression, post-traumatic stress disorder and burnout). Thus, the understanding of police officers stress is crucial when aiming to improve this population health, as well as improve the overall safety of the community (Lucas, Weidner, & Janisse, 2013). Despite the growth of studies investigating the impact of stress on police officers over the years (e.g. Violanti & Aron, 1995) further investigation in this area is needed (Mikkelsen & Burke, 2004), controlling previous methodological and conceptual shortcomings. Hence, allowing the development of knowledge and applied implications ready to be transferred to police officers training. Previous studies investigating stress among police officers relied largely on self-report measures (usually questionnaire and interview-based) and cross sectional designs (Anshel, 2000). While it is believed that this research was important to understand the causes and consequences of stress among this population, it did not fully assess the different sources of acute stress, its magnitude based on physiological data,

and how police officers react and cope with a stressful encounter (Violanti & Aron, 1995). Furthermore, these methods fail to address within-person variations and have been associated with retrospective bias (Nicholls, Jones, Polman, & Borkoles, 2009). Hence, findings rely on partial recall and inference strategies, due to autobiographical memory construction and retrieval biases challenging the validity and reliability of the reports (Segerstrom & O'Connor, 2012).

Nowadays, police forces in most European countries face extremely challenging times. These are due to a combination of factors including open borders, drug trafficking, terrorism, multicultural diversity and inclusion and the overall use of new technologies in contemporary life (Benyon, 1994; Oakley, 2001). Although previous studies have highlighted the effects of acute organizational and operational stress among police officers across different European countries (e.g., Kop et al., 1999; Biggam, Power, Macdonald, Carcaldy, & Moodie, 1997; Queirós, Kaiseler & Silva, 2013; Recasens i Brunet, Basanta, Agra, Queirós, & Selmini, 2009), little is known about the effects of these contemporary demands on police officers occupational health or whether they are somewhat similar or completely different across European countries. In an attempt to understand this relationship and reflect on best practices on police occupational health in Europe, it seems crucial to conduct European comparative research, contributing to the development of a more qualified police training system “*capable of responding quickly and intelligently to the accelerating pace of social change*” (MacDonald et al., 1987, p.4). Although European comparative studies among police officers have strong theoretical and applied implications at an individual and institutional level, little work has been conducted in this area, mainly due the difficulties associated with the research process and described in the following lines.

Firstly, as suggested by Weisburd and Neyroud (2011) there is still a gap between science and policing. In other words, on the one hand, police personnel complicate the use of results from academic research and knowledge. On the other hand, some academics ignore the real scenarios in which the police operate. Additionally, the difficulties researchers face when aiming to conduct research among police institutions, such as the access to data collection procedures (Mathur, 1999), should also be seen as an explanation for the gap between science and policing.

Secondly, there are a diversity of police forces and respective duties across European countries (Vertovec, 2007), which difficult comparisons between countries. Additionally, the language and cultural barriers also difficult the use of standardized

occupational health research methods across European countries. In an attempt to address this problem, researchers could probably contemplate the use of more qualitative research approaches, developed through European research networks, including researchers and police personnel from different countries. Additionally, the inclusion of technology and the use of interdisciplinary knowledge when aiming to compare European police officers' occupational health are also powerful tools to consider. These, will not only overcome simplistic and traditional methodologies previously used, but will also allow comparisons of police officers performance under different European real world scenarios. An example, of an occupational health project assessing stress and coping among police officers including technology and interdisciplinary knowledge was developed in Portugal - SCOPE (Stress and Coping among Portuguese Police Officers- <http://www.fpce.up.pt/scope/index.html>) funded by a Marie Curie Action. The ambulatory research tool was designed by an interdisciplinary research team (psychology, biomedical and electro technical engineers) and it combined wearable electrocardiogram and mobile devices, ready to assess stress and coping among police officers during daily life experience (Kaiseler, Rodrigues, Ribeiro, Aguiar, & Cunha, 2013; Trull & Ebner-Priemer, 2013). The ambulatory method is currently being tested in the city of Porto, Portugal by the third author of this paper.

## **2. SCOPE ambulatory method: Assessing Stress and Coping in real world scenarios among Police Officers.**

The innovated and interdisciplinary SCOPE method proposes a disruptive technology to investigate stress and coping strategies used by police officers working in real world scenarios. Ambulatory Assessment is a recent promising research tool that minimizes retrospective biases while gathering ecologically valid data, including self-reports, physiological or biological data and observed behavior. It has been successfully used across different settings of occupation health (Trull & Ebner-Priemer, 2013). Thus, the current method combines physiological and psychological measures of stress and coping, combining user-friendly and non-intrusive technology, adapted to Police Officers real world needs. Vital Jacket® (VJ) (Cunha, 2012) and electronic diaries held on mobile android phones including GPS (Gomes et al., 2012) are used to collect physiological (HRV) and psychological measures as well as location where the event occur. In this way, police officers use the VJ on a daily basis as well as mobile devices

containing electronic diaries, data is therefore being collected throughout the day. Theoretical implications of this research will advance the international state-of-art in the area of stress and coping among police officers. Particularly, findings will allow to fully understand what are the stressors experienced by police officers working in real world scenarios and their psychophysiological impact on the individual as well as the coping strategies being used to tackle each stressor. Applied implications of the research will allow the design of evidence based stress management interventions, developing the health and wellbeing of police officers, and increasing the safeguard of the overall community. Additionally, this method may be a promising tool to develop future comparative occupational health studies among police officers in Europe.

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