

Experiences of Burnout, Post-Traumatic Growth, and Organisational Support in Police Officers Working in Specialised Units: An Interpretative Phenomenological Analysis

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Accepted: 14 February 2024 © The Author(s) 2024

Abstract

Repeated exposure to traumatogenic material is a part of every working day for police officers in specialist units, such as forensic scene investigation and digital forensic analysis, with recent years marking an increase in its volume and intensity (Office for National Statistics (2018). While this may be considered a price paid for choosing to pursue careers in these areas, it is likely to have a significant impact on a professional and personal level, with psychological and physical effects extending beyond the individual's working hours (Burns et al. in Traumatology 14:20–31, 2008). On the other hand, this important work may contribute to elements of growth and self-development, recognised in existing literature as post-traumatic growth (Tedschi and Calhoun in SAGE Publications, Inc, 1995). The present study adopted a qualitative approach to understanding the lived experiences of seven digital forensic analysts and two forensic scene investigators. Semi-structured interviews explored the impact of their work, as well as their coping strategies and perceived organisational support. Using interpretative phenomenological analysis (IPA), the study yielded rich personal accounts and identified three superordinate themes: "The effects are inevitable", "Creating a safe environment", and "Sense of responsibility and personal growth". Participants described the inevitable effects of their work, along with their coping strategies developed in response to these. Furthermore, participants considered the safety of their work environment and relationships with their colleagues, while also reflecting on their experience of personal growth through their exposure to adversity. Findings are discussed in relation to theoretical and practical implications, as well as directions for future research.

Keywords Working with potentially distressing material \cdot Post-traumatic growth \cdot Forensic science practitioners \cdot Police officers' mental health \cdot Organisational support

Police officer's work involves routine exposure to traumatogenic stimuli. This can be direct exposure to traumatic incidents or visual material, such as crime scenes, photographs and videos, and indirect exposure when listening

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Published online: 18 March 2024

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to or reviewing evidence of traumatic events experienced by victims (Brewin et al. 2022). Over time, this frequent and repeated exposure to extremely graphic and disturbing material may lead to an overwhelm of normal coping mechanisms, placing officers at higher risk of poor psychological outcomes (Velazquez and Hernandez 2019).

Nevertheless, high levels of stress and exposure to trauma are accepted as an inherent occupational characteristic that cannot be changed (Birch et al. 2017), with both police officers and organisations under-estimating its potential for significant professional and personal harm. Research has shown that police officers are far from immune to mental health difficulties in response to the stressful nature of their work (Quierós et al. 2020). A large survey involving 16,857 serving police officers showed that one in five reported mental health symptomatology in the past 4 weeks, including flashbacks, hypervigilance, and sleep disturbance, perceived



to be a direct result from their work (The Job and The Life Survey; Miller et al. 2018). Sickness absences and staff turnover due to poor psychological health and stress have reached an "all-time high", nearly doubling in recent years (Cartwright and Roach 2021). However, studies investigating this topic are sparse, particularly in comparison to a large body of literature exploring the psychological impact on professionals in other disciplines, such as psychology, nursing, and social work (Sutton et al. 2022).

Burnout, Vicarious Trauma, and Secondary Traumatic Stress

Burnout, vicarious trauma, and secondary traumatic stress (STS) are interconnected concepts often mentioned interchangeably in literature, but they hold significant differences that deserve attention. While all three can emerge in high-stress roles, it is important to recognise their unique aspects. Burnout can affect individuals in any occupation and is not solely confined to professions directly exposed to trauma. On the other hand, vicarious trauma and STS arise when individuals in caregiving roles repeatedly encounter the traumatic experiences of others. Each of these concepts is explained in more detail:

Burnout is defined as "a syndrome of emotional exhaustion, de-personalisation and reduced personal accomplishment", as a result of prolonged and unresolved work stress (Maslach and Jackson 1981). The development of burnout can be predicted by a complex interplay between individual factors (e.g. age and personality), occupational factors (e.g. emotionally demanding nature, long working hours), and organisational factors (e.g. high workloads, lack of support, lack of recognition and autonomy) (Maslach et al. 2001). Specifically in police officers, the nature of their job is characterised by all the occupational and organisational stressors listed above. These have shown to have significant associations with symptoms of burnout, such as emotional exhaustion and reduced self-efficacy, in some cases extending to serious psychological distress and psychiatric symptoms (Purba and Demou 2019).

Additionally, police officers' jobs have been related to phenomena such as *vicarious traumatisation* (*VT*; McCann and Pearlman 1990) and *secondary traumatic stress* (*STS*; Figley 1995), both describing the effects of being routinely exposed to traumatogenic material. While these terms are used interchangeably in the literature, some differences are noted. STS refers to acute, short-term physiological and psychological symptoms often resembling those of direct victims of trauma, including increased fear and anxiety, feelings of guilt, sadness or anger, sleep difficulties, intrusive images, and physical exhaustion (Figley 1995). VT is a slightly longer process, referring to profound cognitive, emotional, social, and behavioural changes over time, linked to a shift of core beliefs

about the self, others, and the world (Pearlman and Mac Ian 1995). Over time, VT, STS, and burnout have been linked to higher turnover intentions and lower job satisfaction (Bourke and Craun 2014), ultimately impacting on the operation of these vital services for communities.

These concepts have been studied in mental health experts for over 30 years, with research recently extending to first responders, such as law enforcement personnel (Greinacher et al. 2019). However, research on other professionals throughout the criminal justice system, such as forensic science practitioners (FSPs), remains under-developed. FSPs involve, among others, forensic scene investigators (FSIs) and digital forensic analysts (DFAs), whose jobs require exposure to potentially distressing material in the interest of completing a thorough investigation and analysis of evidence (Slack 2020). More specifically, FSIs are routinely exposed to violent injury, death, and their aftermath through the investigation of crime scenes, while DFAs are called to rate hundreds of thousands of digital exhibits of extreme violence and death, child sexual exploitation and abuse, and suicide. A review of the literature on the impact of investigating crime on the well-being of FSIs and DFAs highlighted that job characteristics and the associated potential for a psychological and physical impact of one's work may be different to frontline and patrolling police officers (Cartwright and Roach 2022). Therefore, this indicates the need for research that specifically focuses on these two groups of police officers (Burruss et al. 2018).

However, considering individual differences in responses to trauma (Bowman 1999), the role of personality traits and attachment styles becomes crucial for individuals in high-stress roles, such as police officers and FSPs. Personality traits, such as trait resilience (Duan et al. 2015), extraversion, and neuroticism (Tehrani 2016), can influence how individuals process and manage exposure to potentially traumatic material. Moreover, attachment styles, particularly secure attachment, may act as a protective factor, facilitating effective coping and emotional regulation (Ditzen et al. 2008). More research is needed to explore the interplay between personality, attachment, and responses to trauma among this professional group.

Coping

For those employed in highly demanding jobs, successful coping in the role is vital for staff well-being, retention, and reduced absenteeism (Craven et al. 2022). Studies looking at the coping strategies of police officers have produced generally consistent findings. Firstly, "positive" coping strategies have included the use of support systems, hobbies outside of work, faith and spirituality, problem solving, and humour (Singo and Shilubane 2022; Sollie et al. 2017). On the other



hand, law enforcement personnel have also reported "passive" coping strategies, such as doing what has to be done, learning to live with the stress, and accepting what has happened (Rosansky et al. 2019). Finally, "avoidance" strategies, such as substance use (Singo and Shilubane 2022), denial (Edwards et al. 2021), and emotional distancing (Civilotti et al. 2021), are not uncommon in police officers dealing with potentially distressing material.

A question arises regarding the potential differences between what is considered a coping strategy, and what is considered a psychological defence. These are two distinct ways in which individuals respond to stress and emotional challenges (Grebot et al. 2006). Coping strategies are thought to be conscious and intentional, and are likely to reflect the "positive" coping strategies mentioned above. On the other hand, psychological defences are thought to be unconscious mechanisms, aiming to protect individuals from overwhelming anxiety and emotional discomfort (Fedorenko et al. 2020). Research has shown that "repressive" or "avoidant" coping styles as mentioned above are likely to act as short-term protective factors against overwhelming emotions, but can prevent emotional processing and therefore may be damaging in the long term, particularly if exposed to recurrent adverse events (Ceschi et al. 2022).

In fact, results from a large-scale study of police officers showed the importance of the "type" of coping adopted, illustrating that those who relied on "avoidance" and "passive" coping mechanisms were more likely to have higher levels of long-term psychological consequences than those who did not (Gershon et al. 2009). However, it is unclear whether the development of these strategies is related to a lack of knowledge, training, and/or encouragement of the use of "positive" coping strategies within this line of work.

Post-Traumatic Growth

Research on responses to trauma has also demonstrated that both direct and indirect exposure on a routine basis can lead to growth and adaptation, namely post-traumatic growth (PTG; Tedeschi and Calhoun 1995). Several factors seem to facilitate this phenomenon. According to Paton's (2006) research in emergency worker populations, growth is linked to personal characteristics (e.g. self-efficacy, personal resilience, positive coping strategies), team characteristics (e.g. cohesion, peer support), and environmental characteristics (e.g. empowerment, organisational support, crisis procedures). This has further been corroborated by studies looking at levels of growth and work-related satisfaction in professionals, which is predicted by strong social support systems, high resilience, satisfaction with life, sense of personal accomplishment, the use of "positive" coping mechanisms, and organisational support (Brady 2017; Leppma et al. 2018;

O'Donovan and Burke 2022). Nevertheless, studies exploring these topics often adopt cross-sectional designs, limiting the ability to draw causal conclusions between different factors (O'Donovan and Burke 2022).

PTG can act as a protective barrier, shielding officers from the daily exposure to traumatogenic material and mitigating the risk of burnout and VT (Leppma et al. 2018). In addition, while levels of burnout and STS have been shown to be related to turnover intention, high levels of growth and work-related satisfaction decrease employee intention to leave the organisation (Gomes et al. 2022). Therefore, organisational understanding and promotion of this phenomenon can play a vital role in its maximisation, both for the well-being of the employees, and staff satisfaction and retention.

While limited research has explored the concept of PTG in FSIs and DFAs, studies have demonstrated higher subjective well-being in internet child exploitation officers compared to the normative range, with a sense of achievement, sense of community, and work-related satisfaction as the main domains contributing to this (Tomyn et al. 2015). Further investigation is required to understand the psychological processes behind the re-framing of traumatogenic material, and the experiences of growth and resilience from the difficult nature of the job.

Organisational Support

Studies have demonstrated that organisational support plays a moderating role in the experience of burnout, STS, PTG, and coping in police officers. Social support and a sense of mutual understanding have been found to be a vital factor for well-being, with individuals who report good social support being at lower risk of experiencing psychological difficulties (Cartwright and Roach 2022). In addition, qualitative studies have yielded similar results, demonstrating the importance of support mechanisms in the workplace. A supportive environment, including improved management and supervision, high-quality training, appropriate resourcing, and psychological support, was influential for reducing work-related stress (Fortune et al. 2018).

This is also the case for police officers in specialised roles, such as FSPs, with Levin et al. (2021) suggesting that the greater the belief among employees that their organisation was addressing work-related stress, the lower the levels of STS and burnout employees presented with, and the higher their levels of work-related satisfaction. Therefore, support and empowerment within the work environment can mitigate the risk of STS and burnout, promoting positively transformational opportunities from exposure to traumatogenic material.

Importantly, police culture plays a significant role in the disclosure and effective addressing of well-being difficulties (Greinacher et al. 2019). Organisational issues, including a "toxic" work culture and failures to promote well-being



genuinely and effectively ("sticking a plaster" approach), are often linked to staff burnout (Thomas 2022). More specifically, police officers are expected to cope with all material they may encounter as part of their role, with disclosures of mental health difficulties often being met with invalidation, ridicule, or damage to career progression (e.g. Bell and Eski 2016). This likely impedes support-seeking behaviours and the use of available well-being resources within their organisations, which merits further research. Understanding the existing challenges and barriers faced by police officers is important in ultimately creating more supportive cultures for mental health within the force, developing organisations that promote well-being and resilience among police officers.

The Present Study

From the outline of the literature above, various gaps have been identified. Firstly, employees in analytical and intelligence roles, namely FSPs, are rarely the subjects of academic research, despite their full immersion in graphic details of crime. Secondly, the above phenomena have been investigated predominantly using cross-sectional approaches, with little research exploring the in-depth accounts of the lived experiences of police officers working in these roles. Thirdly, while research has extensively explored the negative impact of exposure to traumatogenic material on professionals, there is limited research on the potential for growth stemming from this.

The present study therefore aims to address these gaps. The use of the methodology interpretative phenomenological analysis (IPA) will facilitate an exploration of the way in which FSIs and DFAs experience their work on a daily basis and make sense of these experiences. A particular focus will be placed on the psychological impact this may have on them, including experiences of personal growth and development of coping strategies. It is anticipated that this will add to the limited research and understanding of this topic area, help to identify potential areas of need, and contribute to recommendations for support and training.

Method

Ethical Approval

The study was reviewed and approved by the Science, Technology, Engineering and Mathematics Ethical Review Committee of the University of Birmingham. The first author adhered to the University of Birmingham's Code of Practice for Research and the British Psychological Society's Code of Ethics and Conduct.



The study employed a qualitative design, and used IPA (Smith et al. 2022) due to its phenomenological and idiographic approach. IPA was chosen over other more descriptive qualitative approaches in light of its in-depth focus on the individual sense-making and meaning that participants assign to their lived experiences (Biggerstaff 2012).

Participants

A total of nine participants took part in the study. Seven were DFAs, and two were FSIs. Both agencies operate within the same police force, in the same city in the UK. The sample consisted of male (n=6) and female (n=3) police officers. Their ages ranged from 25 to 54 years (M=34, SD=9.70). The average length of service of working in their respective roles was 7.5 years (SD=4.69). This sample size is in line with recommendations by Smith et al. (2022) for practitioner doctorate research projects.

Procedure

According to Smith and Osborn (2003), purposive sampling is best suited for IPA to allow the researcher to seek the experiences and opinions of the most appropriate persons for the particular research issue being addressed. All police officers were recruited from the two identified specialist units, namely DFA and FSI. A minimum of 6 months of working in their role was required to take part in the study. An invite email was sent by the first author to the heads of the specialist units in December 2021, and forwarded to their staff, along with the participant information sheet. Potential participants interested in taking part in the study were encouraged to contact the researcher directly via email to arrange a suitable date and time for the interview. The participants had no pre-existing relationship with the researcher before participating in the study, and no compensation was offered for their taking part in the study.

Data Collection

Nine face-to-face semi-structured interviews were conducted in January–February 2022, lasting between 45 and 95 min each. Participants were given the choice of attending the interviews at their workplace (n=7) or at the University of Birmingham (n=2). On arrival, each participant was provided with a participant information sheet, and reminded of the purpose of the study, as well as given the opportunity to ask any further questions. Verbal and written informed consent were obtained, prior to the interview commencing. Demographic data were collected at the beginning of the interviews, such as participants'



age and gender, along with their length of service. The first author used a semi-structured interview schedule to guide the interview, with pre-prepared open-ended questions exploring how participants experience their role, how they manage exposure to traumatogenic material, as well as perceived available support and training for maintaining well-being. In accordance with IPA, a flexible approach to questioning was adopted, allowing for participants to discuss what was personally relevant to them and their lived experiences (Smith et al. 2022).

On completion of the interviews, the first author asked about the participants' experiences of being interviewed on this sensitive topic. Participants were debriefed and offered information about how to get support should they wish to via a debriefing sheet, which also included the first author's contact details. The interviews were audio-recorded using an encrypted Dictaphone, and transcribed verbatim by the first author. All transcripts were anonymised, and any potentially identifying information was removed. Data collection was concluded following the completion of nine interviews, given that no further participants expressed an interest in participating. The number of interviews (n=9) was already in line with sample size recommendations by Smith et al. (2022), and the process of data analysis therefore commenced.

Data Analysis

The analysis of each transcript followed the steps outlined in Table 1, congruent with the methodology of IPA (Smith et al. 2022).

Stages 1–3 were done electronically for each transcript, while the connecting stages 4–6 were done by hand using tools, such as post it notes and markers.

IPA and Quality Considerations

IPA aims to facilitate an in-depth exploration of individuals' experiences and their subjective sense-making, rooted in phenomenology and idiography (Smith et al. 2009). More specifically, phenomenology explores the essence of human experiences as perceived by individuals, while idiography focuses on understanding the unique and specific details of individual experiences (Smith et al. 2009). Additionally, qualitative research is about meaning-making, and the researcher's interpretation is part of the IPA analysis. A double hermeneutic approach is adopted, whereby the participant's sense-making is subsequently interpreted by the researcher and their own sense-making (Smith and Osborn 2003). As such, while the process of coding, constructing experiential statements, and developing themes is grounded in the participants' narratives, it is not independent of the researcher's subjective reality, personal experiences, assumptions, beliefs, and values.

The inherent role of the researcher in qualitative research is widely accepted. To account for this, IPA suggests undertaking a reflexive and transparent approach, considering the researcher's role throughout the data collection and analytic process (Smith 1996). Therefore, a reflective diary was maintained throughout the different steps of the analysis, considering the researcher's perceptions, assumptions, and beliefs that contribute to the production of the research results (see Larkin and Thompson 2011). This included an

Table 1 The six stages of analysis within IPA (Smith et al. 2022)

Stage	Description
1. Reading and re-reading	The first step involves full familiarisation with the data, ensuring that the focus remains on the participant and their world
2. Exploratory noting	The second step involves coding that extracts semantic and linguistic content, noting objects of concern (e.g. what matters to the participant), and elements of sense making (e.g. what that meant for the participant)
3. Constructing experiential statements	The third step involves exploratory notes that are used to capture experiential claims, concerns, and understandings of each participant
4. Connecting experiential statements	The fourth step involves a mapping process, which enables identification of patterns within the experiential material while noting cohesion and contradiction within the transcript
5. Naming personal experiential themes (PETs)	The fifth step involves naming each cluster of experiential statements to describe its characteristics. This resulted in a table of "superordinate themes", subthemes, and exemplary quotes
Note: The above steps (i.e. stages 1–5) are repeat	ed for every transcript
6. Developing group experiential themes (GETs)	The sixth step involves the exploration of patterns of convergence and divergence across the PETs generated in the previous steps to develop a set of themes that represent the shared and unique features of the experience across the contributing participants



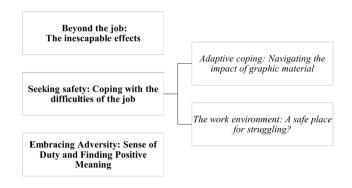


Fig. 1 Superordinate themes and subthemes

exploration of personal experiences and prior knowledge related to the research topic. The diary was influential in this process, ensuring that theme construction remained grounded in the data. In addition, regular research supervision and peer supervision meetings were used to discuss the analytic process and emerging themes, while facilitating continuous reflection. Finally, extracts from the data are presented in the form of quotations, to illustrate and support the researcher's interpretations and theme construction.

Results

The analysis generated three superordinate themes, with one containing two subthemes, shown in Fig. 1. Each theme is described in detail below, accompanied by supporting quotes.

Theme 1: Beyond the Job: The Inescapable Effects

All nine participants¹ contributed to this theme, describing some of the personal and psychological effects of the work, as well as how these extend to their spare time and life outside of work. Most participants supported that exposure to potentially distressing material is bound to have an effect: "I think it's got to have a psychological effect, 100%. It can't not." (Jamie, 392), conveying a sense of inevitability ("it can't not"). This inescapable effect is seen as an inherent feature of the work, over which you have little control: "it's part and parcel of the job and there's nothing you can do about, it is what it is" (Charlie, 70). Charlie's choice of words suggests acceptance of the difficult nature and the effects that come with it ("part and parcel"), but also a sense of resignation to this ("there's nothing you can do about it, it is what it is").

¹ Participants are referred to using gender-neutral pseudonyms.



As specifically described by the participants, the work has consequences that extend to other areas of their life, including their spare time, relationships, and sense of safety. For instance, Charlie describes a significant emotional effect, which is globalised beyond work:

"Because I've been around it and I know, sort of, what happens, [...] you anticipate them happening, you go straight to the worst case scenario [...] I can be a bit more, negative a lot. Seeing the negative in everything, not just related to work, sort of, in everything. I think emotionally, I don't know, I'm just a more negative person I think, more often than not, emotionally maybe I feel more, not necessarily sad, but low." (Charlie, 178)

Charlie repeats the word "negative", really conveying a sense of a perspective that is gained from work ("I know, sort of, what happens") that extends to a permanent lens of negativity ("seeing the negative in everything"). This has led to a generalised cynicism and hopelessness ("you anticipate them happening, you go straight to the worst case scenario"), which is further affecting their overall mood ("not necessarily sad, but low"). Like Charlie, Vic also mentions the access to a unique perspective that the general public may not be aware of: "it kind of gives you a bit of a shock, you know, seeing that society is actually different to how you thought it was or how you assumed it was [...] and you sort of see things differently." (Vic, 197). Vic speaks of an insight into a dark part of society that is unexpected ("gives you a bit of a shock"), which shapes one's perception of others and the world ("you sort of see things differently"). This is also experienced by Leslie:

"I think obviously 99% of people are normal good human beings that aren't doing anything strange or untoward. But there are that 1%. And it's the 1% that I see at my job at 100%, if you know what I mean. [...] So when you go out into the public, maybe your viewpoint is skewed. Well, not maybe. It is skewed. It definitely is. [...] And everyone is warped by it, there's no doubt at all that when you're seeing the worst of the worst all the time, when you're out there, you forget that most people are relatively decent." (Leslie, 655)

Leslie gives a clear account of the volume of exposure to "badness" as part of the work ("1% at 100%"), which alters and biases the perception of others' intentions ("it is skewed", "everyone is warped by it"). As a result, most participants described being hyper-alert or sensitive to threat or danger: "You're always slightly on your toes" (Jamie, 510), even in seemingly innocent situations, "it's probably innocent but, like, taking photos on the beach and whatnot, I sometimes think, "oh no, that kid could be in the background and then you don't know what he's going to do with

that photo"." (Kris, 88). Ray elaborated on this further, explaining that this constant alertness prevents mindfulness in public:

"your eyes are everywhere cause you're always looking for things and I think that's just part of doing this job. [...] if I'm in a comfortable environment I can really relax, but if I'm in a busy place that, say, I'm not used to or not comfortable, then I tend to be very alert all the time. [...] It's nice to know what's coming for you, but at the same time if you can't really relax and get involved and absorbed in what's going on, then that can be a negative" (Ray, 267)

Here, Ray conveys the paranoia with which they experience the world ("if I'm in a busy place, then I tend to be alert all the time"), which has significantly compromised their sense of personal safety ("you're looking out for things", "it's nice to know what's coming for you"). This maintains them in a state of hypervigilance and alertness, preventing them from being mindful and present, and enjoying moments in their spare time ("you can't relax and get absorbed in what's going on").

Further to this, participants also described a certain level of suspicion in interpersonal relationships that is "drilled into you" (Jamie, 458), whereby ulterior motives are considered in interactions with others: "It's just, it's your attitude towards things. [...] You do tend to look for the bad in people before the good. You do tend to think, "well, what's your motive?"" (Ray, 325). Both participants' language suggests the permanent and generalised change in their thought processes ("drilled into you", "attitude towards things") that has become inherent. This is also demonstrated in Gene's words, who depicts suspicious thoughts as automatic and uncontrollable: "if I see like, an older man with a child, sometimes I get these things of, "oh, I hope he's not abusing him or her". And then I just think, "oh God, what am I thinking that for?"" (Gene, 149).

Nevertheless, most participants showed insight into the nature of their perceptions that are inevitably shaped by work:

"No normal person thinks like that, do they? That's not a normal thing. But like, when you see it, you see it. But that's not a normal thing. Like, my mum was going, "oh that's nice, he's playing with that boat for the kiddies" and I'm like, "no, he's doing it to look at the kiddies"." (Leslie, 609)

Leslie expresses that these automatic thought processes are "abnormal" ("it's not a normal thing"), making a comparison and suggesting that there is something different between the general public and those who have undergone this shift in their world view ("when you see it, you see it"). This sense of disconnect described by Ray is experienced

as a significant barrier to creating relatable friendships for Charlie:

"I don't really have a group of friends outside of work, I don't really have that, [...] there's no common ground with forensics and pretty much any other job. But then also, I don't have the common ground of, I can't tell them some mad story about what happened when I went out in town last week. I don't have that, I feel like it's made me grow up far too fast [...] So it does put that barrier up in that, they're not interested in what I've got to say, but I'm not interested in what they're got to say or do either." (Charlie, 303)

This powerful realisation further highlights the lack of common ground with people who are not in this unique work ("there's no common ground with forensics and any other job"). Perhaps exposure to violence and crime creates discrepancy in lived experiences and levels of maturity ("it's made me grow up far too fast"), limiting relatability to people of the same age ("they're not interested in what I've got to say, but I'm not interested in what they're got to say either"), but also potentially limiting interests and parts of the self that are not dominated by work. This creates significant difficulties with building connections with others.

Overall, this theme demonstrates the psychological impact of working with potentially distressing material on participants and their personal lives. Participants described effects that are automatic and uncontrollable, which influence how they view the world and others around them. In response, participants are required to develop coping strategies to manage this.

Theme 2: Seeking Safety: Coping with the Difficulties of the Job

Participants are called to witness material of an extremely graphic nature, which over time shapes their view of the world. This exposure to a different reality has called for adaptation in order to keep themselves feeling safe and protected. All nine participants contributed to this theme, within which two subthemes were identified: (i) *Adaptive coping: Navigating the impact of graphic material*; and (ii) *The work environment:* A safe place for struggling?

Subtheme 1: Adaptive Coping: Navigating the Impact of Graphic Material

This subtheme explores the participants' coping strategies developed for work, as well as the sense of control over one's well-being. This is considered in relation to the extent to which knowledge and understanding of mental health is promoted within their work environment.



Noel describes a time of struggling with flashbacks, which however were ignored, "I didn't deal with it, I probably just tried to ignore it. Yeah, I think I probably did. It wasn't dealt with as such, at all." (Noel, 254). This conveys a sense of passivity to core psychological symptoms that can be distressing ("I didn't deal with it"), with few skills to actively address and minimise these. In line with this, the coping strategies described by the participants are predominantly adaptive and self-taught, in an attempt to keep themselves well and safe from work.

For instance, participants described taking a pragmatic approach to their exposure to traumatogenic material: "You try to see it as though it's not real" (Leslie, 135); "I just try and view it as evidence, as opposed to what it is. And that makes it easier" (Ray, 47). Both Leslie and Ray explain procedures that involve disregarding the potentially distressing nature of the material and detaching any emotions by either denying its reality ("see it as though it's not real") or minimising its weight (labelling it as "evidence"). This approach becomes functional in the role ("that makes it easier"), allowing for protection against absorbing an array of negative experiences:

"If I go away and think about that victim and then I load another one on, and I load another one on, I do this six days on, three days off. After a year, I'm going to be living with the ghosts of a lot of shitty memories and a lot of terrible incidents" (Jamie, 360).

Jamie's use of the words "load on" alludes to a "weight" that is added with each individual victim of crime. Detaching from each of these allows for relief from the "haunting" ("ghosts") of memories of terrible incidents that he is called to respond to on a daily basis. Similarly, Leslie suggests that detachment and de-sensitisation is not only formed from work, but is a skill that is essential for high quality work:

"It's pretty good for this role if you can just stay completely like, detached from it. Because that's what you want, isn't it? You want somebody that is cold and is going to investigate the facts. Because if you're getting emotional over it, you're not necessarily going to be doing the best work [...] The whole point of this job is that you're unbiased" (Leslie, 515)

As such, Leslie's viewpoint gives the impression that the same coping strategies developed to help minimise the potential emotional impact of the work also ensure that work is done in a non-biased and purely professional, detached manner ("you want somebody who is cold and is going to investigate the facts"). Over time, a common experience for most participants was de-sensitisation to the material. This is linked to the overall theme of adaptation, as with experience, participants learn to adjust to a condition that comprises of their routine exposure to the material:

"Obviously all the material that you have to see on a daily basis is difficult. But it does get easier though. Like at the start it's shocking obviously because you've never seen anything like that before. But over time, you become a bit sort of, numb to it I suppose." (Vic, 30)

Vic suggests that this process from "shock" to "numbness" makes the work easier to do and less impactful over time, despite acknowledging that the material remains potentially distressing. The use of the word "numb" further illustrates a protective response, developed against experiencing intense emotions. This is corroborated by Leslie: "It's almost like you grow a callous around it, really. You kind of, you know, get used to seeing—like, nothing shocks me" (Leslie, 740), who describes a development of a protective layer ("callous"), while expressing a globalised reduced shock value ("nothing shocks me"). This may represent an adaptation to a new worldview whereby there are no limits to the "badness" witnessed.

In addition to the pragmatic and de-sensitised responses described above, participants described attempting to minimise the effects of work by ensuring a clear separation between work and their personal lives: "I sort of, keep myself like a shop. Work 9 till 5 and then after that try and separate. I think you have to separate yourself really. I think it's healthy" (Vic, 84). Vic's analogy of themselves as a "shop" demonstrates the importance that they attach to maintaining clear boundaries between their personal life and their work. They describe this as "healthy", suggesting that this compartmentalisation contributes to both their personal and professional well-being and resilience. While this strategy was mentioned by most participants, Kris gave further detail:

"I won't listen to my own music [...] so I don't associate anything with listening to things at home. So, if I put the same playlist on at home, it might then trigger in my head that image. It might come back to me. Or like, family photos. I don't want to see an indecent image, and then like, go down to type and see a photo of my mum or something. Because I don't want to associate the two together. So like, again, keeping work here and home at home. Trying to like, dissociate." (Kris, 171)

Here, Kris demonstrates an awareness and insight into the possibility of the brain making associations which can later be triggering. Kris attempts to sterilise their environment and sensory input at work, showing a strong intention to prevent any possible connections with aspects of their personal life through the word "dissociate". Nevertheless, maintaining this clear divide becomes more difficult when something in the material appears to have a personal relevance, sometimes unexpectedly so:



"Even though they're not the worst videos I've seen, for some reason it just plays more of a part in my mind, because I think I was able to relate it to my home life. And it's that link I think, that, that's when it's worse, as soon as you make that link. Even though there's way worse videos that I've seen, but I've never associated that in real life." (Gene, 240)

Here, Gene reflects on the fact that material that can be linked to one's own reality and life outside of work likely has the most impact, regardless of perceived severity. This may be due to the threatening sense of personal relevance causing a "reality check", and therefore overwhelming one's ability to "dissociate" the content from reality. In response to this, Gene describes an "avoidance" of certain tasks that are linked to aspects of work:

"When they were asleep and I was changing their nappy, I almost felt like I was violating them, even though I was just changing their nappy. [...] it just felt wrong, or like, disrespectful. But it was because of that video that I had seen. So, I found it hard sometimes, and I'd say to their [other parent], "can you do that?", because I didn't really like it." (Gene, 237)

Gene describes an invasion of a work memory into their personal space, whereby a seemingly effortless task (i.e. changing a nappy) is appraised with a work mentality. Gene attaches meaning to the material exposed to at work, shown by the use of the words "violation" and "disrespect", which however is not flexible to change in a harmless situation at home ("it just felt wrong"). This causes great discomfort and an urge to avoid this task ("I'd say to their [other parent], "can you do that?""), which may however be coming into conflict with their important role as a parent ("I found it hard sometimes").

Finally, a major coping strategy identified by all the participants was "darker" (Kai, 154) humour, serving particular functions:

"I think a way to let it out is having a laugh about it rather than trying to keep it down and bottle it up. [...] I think probably a way of dealing with it and being able to talk about it without being all sort of, giving this appearance of being weak, is to have a laugh about it. [...] So like, I'm going to talk about it, because it might have affected me, but I'm going to twist it, if you know what I mean?" (Noel, L140)

Noel suggests that humour is helpful to diffuse pressure in the workplace by expressing one's thoughts and opinions in a lighter manner ("rather than trying to keep it down"). Nevertheless, Noel also introduces a function in which humour is a more "accepted" way of expressing a potential effect, without "giving the appearance of being

weak". Therefore, humour is not only protective for dealing with work, but acts as further protection of one's identity of a "strong" and "resilient" individual ("it has affected me, but I'm going to twist it" so I don't appear weak). This is a reflection that sparks consideration of the narratives created around how participants experience support within units when they struggle.

Coping strategies developed for work, as well as the sense of control over one's well-being, are likely to be related to the extent to which the organisation promotes empowerment and self-development. In relation to this, some participants reported a lack of training for understanding mental health, "there was nothing. The training we had was sort of, technical training of how to do the job. There was nothing about how to cope or anything like that. And yeah, it would have been great to have it" (Charlie, 481). Despite the relevance and importance of mental health in this work, Charlie expresses a lack of ("there was nothing") and wish for ("it would have been great to have it") relevant training, echoed by Leslie who identified the benefit of "techniques that could help proactively" (Leslie, 803).

Subtheme 2: The Work Environment: A Safe Place for Struggling?

This subtheme explores participants' experiences of the culture around mental health in their departments, and the way this is perceived and portrayed, especially in relation to their work. Jamie reports that "I don't think I'll ever hear anyone in the office actually go, "this job is just breaking me mentally". I think you'll never hear it" (Jamie, 636), alluding to a lack of openness about people struggling or experiencing mental health difficulties at work. This is thought to be linked to various narratives adopted over the years. Firstly, some participants expressed a fear of judgement from others when showing vulnerability, with labels such as "weak" dominating the field: "It's the perception of appearing weak, or not being able to cope. That's what tends to get most people." (Ray, 449). Ray suggests that struggling to cope may be perceived as weakness from others, supporting the importance of maintaining an image of "strength" ("perception of appearing weak"). Charlie further elaborates:

"I think after a while, it's a requirement to become sort of hardened from it. And that's it then, it doesn't feel like you can ever really show it [...] you're the police, nothing scares you, nothing affects you, kind of thing. And to break that, you don't want anyone to lose any confidence in your abilities." (Charlie, 239)

Like Ray, Charlie alludes to an expectation of being able to cope that comes with being part of the "police" ("nothing



affects you"). Further to this, Charlie touches on needing to be constantly able to meet others' expectations of strength and resilience, and if these are broken, others may lose their "confidence in your abilities". As such, experiencing any potential difficulties, or struggling as a result of work, is attached to a threat to one's professional identity and competence:

"If what I do is affecting me, can I do it? Should I be doing it? [...] So if all of a sudden a weakness of mine is, you know, going to distressing crime scenes, if I can't do that, then what? Do you only get the nice crimes? *laughter* you know what I mean? What use am I in my role, if I can't do it? It's like a surgeon scared of blood." (Jamie, 768)

Jamie's use of language and humour portrays an absolute in this matter, whereby the possibility of being affected by the work is directly linked to an inability to perform in this role effectively ("what use am I?"). In relation to this, he also speaks about common knowledge of the difficult aspects that the job entails, and the expectation that this is accepted as routine:

"Come in tomorrow and crack on. And that's—cause some of it is, "but that's your job", and I agree to an extent. [...] You've signed up for it, you know what you're going to be doing [...] because I knew when I started doing this job, I was going to see some horrific stuff." (Jamie, 698)

Jamie reflects on the personal responsibility that is assigned to the decision to do this job ("you've signed up for it"), linked to an expectation that the difficult content does not interfere with one's ability or productivity ("come in tomorrow and crack on").

These narratives highlight the sense of fear and stigma experienced by participants at the thought of opening up and disclosing that they may be struggling, which ultimately affect help-seeking and making use of any available resources:

"And so, it's experiences like that, that just make you sort of, just get on with things and don't make any issues [...] a lot of people wouldn't want to say anything because they'd be worrying that their job was going to be at stake. If people are deemed unfit for their work, what happens to them?" (Noel, 166)

Noel not only expresses the same worries that Charlie and Jamie have touched upon above ("job was going to be at stake"), but also provides another explanation for why coping strategies appear to be more self-taught and repressive in some situations ("just get on with things and don't make any issues"). Further to this, when considering the response to someone struggling with work, Noel's

use of language alludes to "being done to", rather than a collaborative approach of ensuring well-being ("what happens to them?"). A lack of empowerment in this matter is likely to further increase fear and reluctance to seek help. As a result, participants described the need for a "culture change", whereby talking about difficulties is "nurtured out of some people" (Kai, L399). An ideal approach is described by Noel:

"Being told, "these are things you might experience as a result of this", that actually, it's fine, it's not something to be ashamed of and that it will pass, just get it out there, there are the ways to deal with it." (Noel, 218).

In this extract, a safe culture is portrayed as one where mental health experiences are normalised ("it's fine, it's nothing to be ashamed of"), reassurance is provided ("it will pass"), support seeking is encouraged ("just get it out there"), and advice is given ("these are the ways to deal with it").

Importantly, colleagues are described as the main and most important source of support for participants: "It's just the people that you work with that keep you ticking over" (Jamie, 795), as there is a sense of mutual understanding which cannot be obtained from others outside of work: "You can't really talk to anyone else, really" (Kris, 211). This perspective was shared by most participants:

"It's quite tightknit with people. Because they're also going through the same things. So it becomes like a family with people [...] They understand and they've probably gone through the same things themselves. So it's easy to talk to them, and it's easy for them to give you advice." (Kai, 138)

Kai gives a sense that the unique nature of the work, and the call to cope with those experiences, brings people close together, creating a strong bond ("it's tightknit", "like a family") that creates a safe space to express oneself and share relevant advice ("it's easy to talk to them"). These close relationships further put colleagues in a position to safeguard one another through knowing each other's signs of stress: "You can see, you can notice that small change in someone [when something is bothering someone]" (Vic, 407). Participants gave a sense that their colleagues look out for them and their well-being, supporting each other in times of need: "I think if I was to say to a lot of people like, "I'm really struggling with that job, do you mind taking it on?", they'd go, "yep, fine."" (Gene, 375).

Overall, this theme demonstrates how participants have adapted and developed coping strategies to create a sense of safety for themselves, while noting their experiences within their work environment. The final theme pulls the



above together and portrays ways in which professionals have adapted in a way that has led them to a path of growth and self-development in this difficult work.

Theme 3: Embracing Adversity: Sense of Duty and Finding Positive Meaning

All participants contributed to this theme in different ways. It explores the sense of responsibility participants feel as a result of undertaking the work they do on a daily basis. Participants further reflected on what their work had given them, despite its challenges, and how they developed and grew as a person from being exposed to adversity on a regular basis. Kai describes how their work has a very real impact on people and their lives:

"You never forget the serious implications of the work that we do, how it affects people. It's a thing of, if we get it wrong, it can have serious consequences for someone on the other end. So we've failed a victim there basically, haven't we?" (Kai, 23).

Here, Kai demonstrates the real commitment of participants to their work, and the sense of duty they feel. The use of the word "failed" portrays the great sense of obligation participants have towards victims of crime. While this is likely to represent a significant weight associated with the work ("serious consequences for someone"), participants also frame this as an aspect that contributes to and maintains their motivation and drive to do the work:

"I feel like I'm making a difference. So, you know, somebody has to do this job. I think it's really important. And you know, I do feel like I'm doing a service. So, although it's not the easiest job, I do feel like it's worthwhile, and that helps, it makes it easier I guess." (Gene, 14)

Gene portrays a great sense of importance in the work conducted, acknowledging the difference it makes in people's lives ("I feel like I'm making a difference"). As such, this acts as a balance to the difficult aspects of the work ("although it's not the easiest"), making it feel "worthwhile". This is an experience described by most participants:

"It's really sort of, rewarding. Like, even though it's not maybe the nicest thing that you're doing all the time, it is very sort of like, gratifying [...] cause every sort of job you're doing, is sort of benefitting a wider—you know, it's bigger than you are" (Vic, 138)

Having recognised the real difference made as part of one's work, Vic describes the contribution to a system that has implications on a wider level beyond an individual ("it's bigger than you are"), supporting the creation of

safe communities and preventing future harm. As such, Vic describes deriving a genuine reward from it ("it's really sort of, rewarding"), but also uses the word "gratification", which alludes to an experience of pleasure, pride, or fulfilment.

In addition, participants reflected on what the job has brought them over time: "I think it teaches you a lot about yourself, like what sort of person you are" (Vic, 147). This extract suggests that the job is a "teacher", bringing into light avenues of oneself that may not have been experienced without such intense exposure to adversity. This is further corroborated by other participants, who mention increased understanding of their own signs of stress, "I'm better able to see the kind of, signs of stress or worry or anything like that, outside of work as well as inside" (Kai, 125), but also an opportunity for insight into their own strength and resilience, "if I wasn't in this job, I would never have been exposed to this sort of stuff, so I wouldn't know if I can deal with that" (Kris, 159).

Participants relate the unique perspective described in theme 1 ("Beyond the Job: The Inescapable Effects") to a teaching opportunity that has put them in a position to recognise dangers that other people may not be aware of. Jamie interestingly uses the word "lucky" (Jamie, 77) to describe this position, despite all the noted challenges and potential to be negatively impacted by the work. Ray elaborates on this further:

"I think it's a good thing, because as far as I'm concerned, my kids will never be in a position where they're going to be subject to anything like this. And I'm not saying the kids that are have got neglectful parents, but they just don't appreciate some of the dangers that are out there, so they don't think about it, therefore they don't take the necessary precautions. [...] You probably become a bit overprotective in some ways, but I'd rather be like that than you know, not" (Ray, 232)

In this quote, the hypervigilance and paranoia mentioned in theme 1 is reframed in a positive way, whereby Ray feels that unique perspective is used to safeguard themselves and their loved ones ("take the necessary precautions"). Having the extra knowledge puts Ray in a powerful position of perceived control over ("as far as I'm aware of") the dangers that others who do not undertake this type of work may not be aware of. Finally, most participants described this changed view of the world as a catalyst to learning to appreciate life more:

"I just don't waste time on people that I don't think are worth it. Why would you? I'm happy with the people I've got around. So yeah, it's sort of, live for the now and focus your energies on those people that are important to you. [...] Again, I think that actu-



ally comes from this job. [...] Cause you never know what's around the corner. Yeah, so, live for the now [...] Because you see how abruptly things can come to an end. [...] There's no point being the richest man in the graveyard *laughs*. So yeah, enjoy yourself a bit." (Ray, 340)

Exposure to the negative side of the world ("you see how abruptly things can come to an end") has made Ray re-consider their priorities in life ("there's no point being the richest man in the graveyard"), live in the present ("live for the now"), and shift the focus on things that are truly meaningful ("focus your energies on those people that are important to you"). Vic also recognises this specifically in relation to their interpersonal relationships: "it does sort of, make you appreciate people more [...] your relationships with people get stronger just because of all the considerations that you end up sort of making" (Vic, 313), further describing emotional developments that have enhanced their quality, such as "maturity", increased "patience", and "compassion" (Vic, 157, 262). This realisation of the importance of life creates a vital balance between the exposure to difficult materials at work and the pursuit of meaningful and fulfilling activities at home that "offsets the nasty things" (Ray, 293).

Overall, this theme demonstrates how participants have come to make sense of the meaning behind the work they do on a daily basis. The challenges of work are re-framed in a way that contribute to perceived evolution and growth, ultimately enriching their lives, strengthening relationships, and maintaining theirs and their colleagues' safety.

Discussion

The primary aim of the study presented here was to better understand the lived experiences of police officers serving in specialised roles, such as forensic scene investigation and digital forensic analysis, and how they make sense of these. Our research demonstrates the profound impact of this work on police officers, while revealing the nuanced sense of purpose and fulfilment associated with it.

Summary of Key Findings

Several patterns emerged from the data, largely consistent with existing literature. Firstly, participants described the impact that the work has had on them, giving the sense that this was inevitable. A large number of studies have demonstrated that continuous exposure to traumatogenic material is linked to psychological difficulties, such as burnout, STS, and VT, with symptoms including intrusive imagery, avoidance, and changes in mood (e.g. Krause 2009; Burns et al. 2008). Participants also described a process of

de-sensitisation, whereby the material becomes less shocking and distressing over time. This process in relation to potentially distressing material has been explained by the four stage model of adaptation (Cruz 2011). It recognises an initially strong response to the content, which is followed by attempts to compartmentalise difficult feelings, deal with the reality of the content, and finally coming to terms with a new view of the world. This process therefore explains the transition between an emotional processing of the material, to an analytical and pragmatic approach, as described by the participants in this study. De-sensitisation can serve to increase an individual's tolerance to the material (Fanti et al. 2009), and therefore acts as a protective factor. Consistent with existing research, this may extend to one's personal life and emotional experiences in interpersonal relationships, impacting on those, and creating a disconnect with the "outgroup" (Powell et al. 2015).

This disconnect was described by various aspects of participants' experiences, such as their view of the world and others. More specifically, their intense exposure to "darkness", crime, and violence increased participants' hypervigilance, paranoia, and risk awareness, including for day-to-day activities or aspects that may be seemingly innocent to the public. The link between exposure to traumatogenic material and distrust of the world has been supported by previous research, both in FSPs (Bourke and Craun 2014) and also other professionals, such as therapists (McNeillie and Rose 2020). This is in line with research on VT suggesting a change in worldview (McCann and Pearlman 1990), and can be further explained by cognitive theories and the development of core beliefs as a result of salient life experiences, which further influence automatic appraisals of events in daily life (Fenn and Byrne 2013). In addition, theories of compassion-focused therapy present the concept of the threat system being over-activated in receipt of traumatic events (Gilbert 2020), further influencing the experience of negative thoughts and emotions.

Nevertheless, though such experiences can be difficult to cope with, participants also framed them as positive, due to being able to protect themselves and their loved ones from the harm that can occur in their view of the world. In line with this, participants spoke about areas of growth and self-development as a result of their work. Consistent with previous findings, FSPs believed that their work was especially worthwhile and makes a difference, which filled them with a sense of achievement and satisfaction (Holt and Blevins 2011; Perez et al. 2010; Tomyn et al. 2015). In turn, satisfaction from work is linked to lower turnover intention, regardless of the level of burnout (Gomes et al. 2022). Along with this, the present study highlighted areas of growth, such as self-awareness, enrichment of interpersonal relationships, and appreciation of life. These are all likely to act as protective factors, increasing the use of



engagement in self-care activities, reliance on support networks, and use of adaptive coping strategies (Denk-Florea et al. 2020). To our knowledge, no qualitative studies have specifically explored elements of growth in FSPs, although there has been an increase in empirical studies that focus on PTG in other professional groups exposed to traumatogenic material (e.g. Tsirimokou et al. 2022).

Notwithstanding, recent research has adopted a more critical appraisal of self-reported post-traumatic growth, dividing it into two constructs: "constructive" growth and "illusory" growth (Boerner et al. 2020). These two constructs highlight the distinction between authentic and sustainable development, as opposed to superficial changes or actions that may not result in meaningful growth. More specifically, "constructive" growth signifies a genuine and profound shift in perspective and personal development, indicative of a deep internal process. Conversely, "illusory" growth has been identified as a coping mechanism, where individuals strive to find meaning and reframe challenging experiences in an attempt to manage distress, without necessarily undergoing profound personal growth (Boals et al. 2019). In the context of police officers, it is important to consider whether the experiences of growth reported by participants represent long-term psychological changes and development, or psychological adaptations and cognitive processes geared towards emotional regulation and reduction of psychological distress. Various factors are likely to influence how individuals in highly challenging roles perceive and report experiences of growth.

Firstly, coping styles adopted by participants are likely to impact their experiences of growth, especially given the continuous and consistent exposure to traumatogenic material as part of their roles. Consistent with existing research, some of the coping strategies frequently used by participants were compartmentalisation and detachment, denial, and minimisation (Edwards et al. 2021). While these were described by participants as conscious efforts to minimise the impact and maintain productivity day to day, they can be seen as highly repressive, as they aim to avoid uncomfortable thoughts, feelings, or experiences related to their exposure to traumatogenic material.

Freud's psychodynamic theory has classified these strategies as defence mechanisms, which are coping mechanisms that are thought to develop and operate outside of conscious awareness (Cramer 1991). These encompass denial (refusing to accept a difficult reality), repression (pushing away distressing thoughts and feelings related to their work), and dissociation (disconnecting from one's thoughts and feelings), which may have become ingrained patterns in how police officers navigate the challenging nature of their work. For professionals in highly challenging roles with continuous exposure to trauma, these mechanisms are likely to be beneficial in maintaining emotional resilience and focus,

objectivity, and rational decision-making. However, overreliance and persistent use of these defence mechanisms can lead to long-term effects such as increased symptoms of STS and VT (Kelty et al. 2021), as well as globalised emotional detachment and unresolved trauma, hindering police officers' ability to effectively process and manage their emotions (Briere and Runtz 2015). This, in turn, can negatively impact their personal relationships, communication, likelihood to seek help, and overall job performance. Furthermore, defence mechanisms are likely to limit experiences of post-traumatic growth by fostering disconnection from genuine emotions and experiences. This creates a barrier to addressing the emotional impact of the work, which in turn hinders authentic adaptation in response to trauma (Asmundson et al. 2021). Thus, psychological defences and adaptations are unlikely to be a substitute for mental health support and self-care. Understanding and addressing these defence mechanisms is crucial in providing comprehensive support to enhance officers' coping skills, emotional wellbeing, and personal development.

On the other hand, Lazarus and Folkman's Transactional Model of Stress and Coping (1984) emphasises the significance of conscious awareness and active decision-making in response to stressors. It categorises coping strategies as problem-focused (directly addressing the stressor), or emotion-focused (addressing the emotional response), based on the individual's appraisal and evaluation of available personal resources. In the context of coping with difficult work, conscious processes as supported by this theory allow police officers to recognise their stressors and make intentional efforts to manage challenges effectively, by using adaptive coping strategies. For instance, one of the main sources of support for participants was their colleagues, sourcing most comfort in the sharing of similar experiences and mutual understanding. This is likely to act as a protective factor, as informal conversations with colleagues have been found to increase resilience and reduce the impact of VT (Massey et al. 2019). A common language developed among colleagues is dark humour, a long-standing strategy commonly used by police officers, which allows them to deal with the stressors of the job, debrief, and discuss difficult content with one another (Kelty and Gordon 2015).

Despite this, participants experienced their organisation as cultivating cultural pressures that did not allow for their expression of potential mental health difficulties, due to fear of stigmatisation and hindrance of career progression. Cultural influences and strive for compliance with expected norms can be significant predictors of maladaptive coping, extending to long-term mental health consequences (Gutschmidt and Vera 2022). In this study, it is noted that few participants recognised the continuum of being affected by something, which could start from simply feeling an emotion in response to it, to experiencing significant distress that interferes with one's



professional and personal life. As such, these narratives portray the presence of an inflexible association whereby "no emotion whatsoever is to be felt, because emotions make you appear weak, and therefore make you incompetent at your job". Consequently, organisational characteristics play a pivotal role in the adoption of repressive and avoidant coping mechanisms, as described by participants, striving to distract themselves from emotions and escape from distress. Furthermore, avoidance of seeking help or engaging in discussions that require emotional expression is likely, further hindering effective communication and emotional processing.

When assessing experiences of growth, both organisational and cultural characteristics are also likely to influence self-reports, whereby FSPs feel pressured to project an image of strength and growth to conform to professional expectations. This could give rise to superficial appearances and perceptions of growth, masking however unresolved traumatic responses or negative emotions that need to be addressed before genuine growth can occur. Overall, this highlights the necessity for trauma-informed support and a clear understanding of the conscious and unconscious processes that contribute to how police officers cope with the demands of their challenging work, and ultimately achieve genuine development and growth.

This has been corroborated by research, whereby immediate supervisors and the organisational culture have been found to be influential, with compassion and authentic leadership, guidance, and supervision majorly contributing to employee well-being (Powell et al. 2014). Similarly, leadership that is perceived as "health-oriented", meaning that a supervisor is aware of the difficulties related to the work and places importance on health, is shown to be associated with lower levels of burnout (Santa Maria et al. 2021). As such, a culture that promotes expression, self-efficacy, resilience, and effective management of stress can be vital in building a psychologically healthy and developing workforce.

Practical Implications

Our findings represent a first step to increasing awareness of the positive and negative ways in which FSPs are affected by routine exposure to traumatogenic material. According to the Job Demands-Resources Model, an imbalance between psychological demands of a job, and its available resources, could lead to psychological distress and burnout (Bakker and Demerouti 2007). Conversely, a high number of resources and job positives can offset the effects of high job demands. Therefore, having demonstrated the high levels of operational and organisational stressors related to the job of FSPs (Queirós et al. 2020), it is vital that adequate resources are in place. Importantly, it is required that resources and policies respond to the unique characteristics of this population,

adapting to the specific culture and organisational framework in order to be accepted and embedded as common practice.

Based on our findings, the following recommendations are made:

- Firstly, guidelines have suggested the importance of identifying the most suitable individuals during recruitment and selection (Wortley et al. 2014). Having identified personal factors that help act as a buffer to the development of STS and burnout, individuals who are using adaptive coping strategies, have a strong social support network, are able to separate work from personal life, and are more psychologically minded, may be the right individuals to be a member of this workforce. Furthermore, given the relevance of individual differences, such as personality traits and attachment styles, to responses to trauma and high-stress situations, organisations may wish to consider the use of psychometrics as part of their selection and recruitment process. This may identify candidates who possess inherent qualities that are suited for handling the unique demands of the job, and will ultimately reduce sickness and turnover rates.
 - Induction training would benefit from including psychoeducation around mental health, the likely impacts of the job, positive and proactive coping skills, recognition of signs of distress in oneself and colleagues, and a clear outline of available support and how to access it. The promotion of positive and proactive coping skills will also involve fostering awareness of conscious and unconscious processes, which play a crucial role in how FSPs cope with the demands of the work and experience post-traumatic growth, especially within the context of continuous exposure to adversity. Recognising the psychological defences commonly used can help them adopt more conscious processes to coping, whereby they make decisions and respond to stressors consciously, seeking appropriate support. Providing training and resources that promote a diverse set of coping strategies, and fall within both problem-focused (e.g. problem-solving techniques, communication, debriefing) and emotion-focused (e.g. mindfulness, relaxation, emotion regulation, physical exercise, and seeking social support) categories, will be vital. Further to this, training opportunities need to be available throughout one's career, supporting continuous self-development and reinforcing positive coping behaviours. It is important that employees feel empowered in the difficult context of their work, and therefore opportunities for personal growth need to be maximised (Burns et al. 2008). Along with that, supervisors are also in an important position to support their employees. Therefore, individuals in a supervisory role may require extra training on safeguarding the welfare of their employees, including



- mental health awareness, supervision techniques, conducting case reviews, and debriefing strategies.
- 3. Thirdly, in line with the above, regular and consistent opportunities for de-compression (e.g. breakout rooms), reflective spaces, counselling sessions, and debriefs are recommended, with a potential of external experts facilitating these sessions. Specific initiatives within the police, such as Trauma Risk Management (TRiM), are tailored to address the unique challenges and demands of the work, aiming to proactively prevent psychological distress and foster resilience among officers exposed to major incidents (Foley and Massey 2019). Nonetheless, careful consideration must be given when implementing such interventions, due to the pervasive frequency of exposure to traumatic events. In highstress environments, officers who unconsciously employ psychological defences to cope with frequent exposure to traumatic incidents may struggle to fully engage in incident debriefings. Therefore, sustained support and mental health resources become imperative. Consistent and normalised opportunities for reflection can help FSPs to actively process their emotions and experiences, addressing unconscious distress more effectively. This, in turn, can promote healthy ways to find meaning and reframe experiences, leading to true personal development rather than superficial adaptations. However, it is essential to approach these sessions with sensitivity, recognising the potential risks associated with reflection, such as re-traumatisation, rumination, and exposure to overwhelming emotions (Lengelle et al. 2016). The adoption of trauma-informed approaches is important, ensuring access to highly skilled professionals, fostering a safe environment and continuously promoting the use of healthy coping skills (Grossman et al. 2021). This will allow for reflection to become a constructive tool for FSPs to process their emotions, learn from experiences, and enhance their well-being.
- 4. Finally, creating a culture where staff feel safe enough and able to express how their work may impact on them is also an important step towards creating a compassionate working environment, which will act to protect against the effects of routine exposure to traumatogenic material (Maguen et al. 2009). Under-reporting of symptoms is highly linked to stigma associated with mental health difficulties within the police (Marshall et al. 2021), significantly impacting on help-seeking behaviours and increasing isolation (Crowe et al. 2016). A supportive and open culture will allow FSPs to discuss their emotions and experiences without judgement, which is likely to reduce reliance on psychological defences that may hinder emotional well-being in the long-term. In addition, promoting "constructive" growth involves open communication about emotions,

supporting individuals in their journey to self-discovery and self-development through challenging experiences (Peters et al. 2021). Therefore, it is vital that organisations and supervisors demonstrate that struggling is responded to in a compassionate and collaborative way, promoting a "zero tolerance" approach against stigmatisation. Ultimately, staff retention will be achieved when employees feel valued and safeguarded, which in turn can counteract the possible difficulties experienced as part of the job, and can extend to benefits for the organisation, such as increased productivity, effectiveness, and morale (Purba and Demou 2019).

Limitations and Future Research

Certain limitations of the study need to be highlighted. Intrinsic to the nature of IPA, which focuses on individual experiences of small samples, participants represented a small number of FSPs, isolated to one town of the UK and a specific police force. This inherently limits the representativeness of our findings to the general population of FPSs. Along with this, the participants formed part of two separate professions, namely forensic scene investigation and digital forensic analysis. While their professions and daily experiences had significant similarities, future research may wish to explore each population separately to identify individual experiences related to their unique characteristics.

In addition, our sample may represent staff who were not overwhelmed by work and felt they had time to take part in the study. While the findings are perceived to be an honest account of the challenges experienced by the participants, this fact needs to be considered in their interpretation, as important perspectives may be missing. Furthermore, some interviews were conducted in the participants' work environment in order to facilitate participation during working hours. This may have contributed to a perceived sense of observation by colleagues and managers, reducing the level of comfort in sharing personal experiences, which is particularly relevant in light of the small sample size.

It is important to acknowledge that the present study collected data at one point in time only, and therefore could not explore personal evolution and growth over time. Future qualitative research may benefit from undertaking interviews at multiple time points to better understand police officers' experiences over time, offering a more dynamic understanding of their daily challenges and support needs. Longitudinal studies could also provide valuable insights into the potential effectiveness of interventions or support mechanisms on the well-being of FSPs.

Nevertheless, the study brings to light a unique perspective that makes important contributions to an understanding of the lived experiences of this population, while identifying important avenues for future research. Particularly



with concepts such as PTG, on which research is still in its infancy, future studies may need to focus on larger samples to enable a better understanding of this phenomenon in this population, including relevant personal and professional factors that can maximise it. In conjunction with this, having identified attributes and skills that can act in a protective manner against symptoms of VT and burnout, future research could focus on developing specific profiles for employers, benefitting in recruitment and selection of a resilient workforce.

Finally, the recommendations outlined above illustrated the importance of a change in culture and an increased availability of wellness interventions and training. Future research could focus on evaluating the changes and subsequent effectiveness of these, contributing to continuously developing practices and policies.

Conclusion

This study richly demonstrated the impact of the intrinsically difficult nature of the role of FSPs, highlighting professional and personal outcomes, coping strategies and perceived organisational support. Our findings, in conjunction with the existing literature, suggest important practical implications, with the aim of minimising VT and burnout, maximising growth and resilience, while maintaining operational function and effectiveness in these crucial roles.

Data Availability The data collected and analysed in this qualitative study are not publicly available due to the nature of the research, which involves sensitive and personal information from study participants.

Declarations

Ethical Approval All procedures performed in the study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Consent to Participate Informed consent was obtained from all individual participants included in the study.

Conflict of Interest The authors declare no competing interests.

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References

- Asmundson GJG, Paluszek MM, Taylor S (2021) Real versus illusory personal growth in response to COVID-19 pandemic stressors. J Anxiety Disord 81:102418. https://doi.org/10.1016/j.janxdis. 2021.102418
- Bakker AB, Demerouti E (2007) The Job Demands-Resources model: state of the art. J Manag Psychol 22(3):309–328. https://doi.org/10.1108/02683940710733115
- Bell S, Eski Y (2016) 'Break a leg—it's all in the mind': police officers' attitudes towards colleagues with mental health issues. Policing 10(2):95–101. https://doi.org/10.1093/police/pav041
- Biggerstaff D (2012) Qualitative research methods in psychology. In: Rossi G (ed) Psychology—Selected Papers. InTech. https://doi. org/10.5772/38931
- Birch P, Vickers MH, Kennedy M, Galovic S (2017) Wellbeing, occupational justice and police practice: an 'affirming environment'? Police Pract Res 18(1):26–36. https://doi.org/10.1080/15614263.2016.1205985
- Boals A, Bedford L, Callahan J (2019) Perceptions of change after a trauma and perceived posttraumatic growth: a prospective examination. Behav Sci 9(1):10. https://doi.org/10.3390/bs901 0010
- Boerner M, Joseph S, Murphy D (2020) A theory on reports of constructive (real) and illusory posttraumatic growth. J Humanist Psychol 60(3):384–399. https://doi.org/10.1177/0022167817719597
- Bourke ML, Craun SW (2014) Secondary traumatic stress among internet crimes against children task force personnel: impact, risk factors, and coping strategies. Sexual Abuse 26(6):586–609. https://doi.org/10.1177/1079063213509411
- Bowman ML (1999) Individual differences in posttraumatic distress: problems with the dsm-iv model. Can J Psychiatry 44(1):21–33. https://doi.org/10.1177/070674379904400103
- Brady PQ (2017) Crimes against caring: exploring the risk of secondary traumatic stress, burnout, and compassion satisfaction among child exploitation investigators. J Police Crim Psychol 32(4):305–318. https://doi.org/10.1007/s11896-016-9223-8
- Brewin CR, Miller JK, Soffia M, Peart A, Burchell B (2022) Posttraumatic stress disorder and complex posttraumatic stress disorder in UK police officers. Psychol Med 52(7):1287–1295. https://doi.org/10.1017/S0033291720003025
- Briere J, Runtz M (2015) Dissociation in individuals denying trauma exposure: findings from two samples. J Nerv Ment Dis 203(6):439–442. https://doi.org/10.1097/NMD.0000000000000000000303
- Burns CM, Morley J, Bradshaw R, Domene J (2008) The emotional impact on and coping strategies employed by police teams investigating internet child exploitation. Traumatology 14(2):20–31. https://doi.org/10.1177/1534765608319082
- Burruss GW, Holt TJ, Wall-Parker A (2018) The hazards of investigating internet crimes against children: digital evidence handlers' experiences with vicarious trauma and coping behaviors. Am J Crim Justice 43(3):433–447. https://doi.org/10.1007/s12103-017-9417-3
- Cartwright A, Roach J (2021) The wellbeing of UK police: a study of recorded absences from work of uk police employees due to psychological illness and stress using freedom of information act data. J Policy Pract 15(2):1326–1338. https://doi.org/10.1093/police/paaa033



- Cartwright A, Roach J (2022) A price paid? A review of the research on the impact of investigating serious crime on the wellbeing of police staff. The Police Journal: Theory, Practice and Principles 95(1):109–126. https://doi.org/10.1177/0032258X211049335
- Ceschi G, Meylan S, Rowe C, Boudoukha AH (2022) Psychological profile, emotion regulation, and aggression in police applicants: a Swiss cross-sectional study. J Police Crim Psychol 37(4):962–971. https://doi.org/10.1007/s11896-022-09548-0
- Civilotti C, Di Fini G, Maran DA (2021) Trauma and coping strategies in police officers: a quantitative-qualitative pilot study. Int J Environ Res Public Health 18(3):982. https://doi.org/10.3390/ijerph18030982
- Cramer P (1991) The development of defense mechanisms. Springer, New York. https://doi.org/10.1007/978-1-4613-9025-1
- Craven HP, Hallmark M, Holland F, Maratos FA (2022) Factors influencing successful coping among crime scene investigation (Csi) personnel: recruiting for resilience a mixed methods study. J Police Crim Psychol 37(3):549–568. https://doi.org/10.1007/s11896-022-09521-x
- Crowe A, Averett P, Glass JS, Dotson-Blake K, Grissom S, Ficken D, Holland V, Holmes J (2016) Mental health stigma: personal and cultural impacts on attitudes. Journal of Counselor Practice. https://doi.org/10.22229/spc801925
- Cruz N (2011) Ingesting poison: adapting to exposure to child pornography. FBI Law Enforcement Bulletin. Retrieved April 28, 2023, from https://leb.fbi.gov/spotlights/safeguard-spotlight-ingesting-poisonadapting-to-exposure-to-child-pornography
- Denk-Florea C-B, Gancz B, Gomoiu A, Ingram M, Moreton R, Pollick F (2020) Understanding and supporting law enforcement professionals working with distressing material: findings from a qualitative study. PLoS ONE 15(11):e0242808. https://doi.org/10.1371/ journal.pone.0242808
- Ditzen B, Schmidt S, Strauss B, Nater UM, Ehlert U, Heinrichs M (2008) Adult attachment and social support interact to reduce psychological but not cortisol responses to stress. J Psychosom Res 64(5):479–486. https://doi.org/10.1016/j.jpsychores.2007.11.011
- Duan W, Guo P, Gan P (2015) Relationships among trait resilience, virtues, post-traumatic stress disorder, and post-traumatic growth. PLoS ONE 10(5):e0125707. https://doi.org/10.1371/journal.pone.0125707
- Edwards KL, Eaton-Stull YM, Kuehn S (2021) Police officer stress and coping in a stress-awareness era. Police Q 24(3):325–356. https://doi.org/10.1177/1098611120984162
- Fanti KA, Vanman E, Henrich CC, Avraamides MN (2009) Desensitization to media violence over a short period of time. Aggressive Behav 35(2):179–187. https://doi.org/10.1002/ab.20295
- Fedorenko O, Dotsenko V, Okhrimenko I, Radchenko K, Gorbenko D (2020) Coping Behavior of Criminal Police Officers at Different Stages of Professional Activity. BRAIN. Broad Research in Artificial Intelligence and Neuroscience 11(2):124–146. https://doi.org/10.18662/brain/11.2/78
- Fenn K, Byrne M (2013) The key principles of cognitive behavioural therapy. InnovAiT: Education and Inspiration for General Practice 6(9):579–585. https://doi.org/10.1177/1755738012471029
- Figley CR (1995) Compassion Fatigue: Coping With Secondary Traumatic Stress Disorder In Those Who Treat The Traumatized, 1st edn. Routledge. https://doi.org/10.4324/9780203777381
- Foley J, Massey K (2019) Police officers and post-traumatic stress disorder: discussing the deficit in research, identification and prevention in England and Wales. The Police Journal: Theory, Practice and Principles 92(1):23–34. https://doi.org/10.1177/0032258X18761284
- Fortune N, Rooney B, Kirwan GH (2018) Supporting law enforcement personnel working with distressing material online. Cyberpsychol Behav Soc Netw 21(2):138–143. https://doi.org/10.1089/cyber. 2016.0715

- Gershon RRM, Barocas B, Canton AN, Li X, Vlahov D (2009) Mental, physical, and behavioral outcomes associated with perceived work stress in police officers. Crim Justice Behav 36(3):275–289. https://doi.org/10.1177/0093854808330015
- Gilbert P (2020) Compassion: from its evolution to a psychotherapy. Front Psychol 11:586161. https://doi.org/10.3389/fpsyg.2020. 586161
- Gomes GP, Ribeiro N, Gomes DR (2022) The impact of burnout on police officers' performance and turnover intention: the moderating role of compassion satisfaction. Adm Sci 12(3):92. https://doi. org/10.3390/admsci12030092
- Grebot E, Paty B, Girard Dephanix N (2006) Styles défensifs et stratégies d'ajustement ou coping en situation stressante. L'encéphale 32(3):315–324. https://doi.org/10.1016/S0013-7006(06)76158-9
- Greinacher A, Derezza-Greeven C, Herzog W, Nikendei C (2019) Secondary traumatization in first responders: a systematic review. Eur J Psychotraumatol 10(1):1562840. https://doi.org/10.1080/20008 198.2018.1562840
- Grossman S, Cooper Z, Buxton H, Hendrickson S, Lewis-O'Connor A, Stevens J, Wong L-Y, Bonne S (2021) Trauma-informed care: recognizing and resisting re-traumatization in health care. Trauma Surg Acute Care Open 6(1):e000815. https://doi.org/10.1136/ tsaco-2021-000815
- Gutschmidt D, Vera A (2022) Organizational culture, stress, and coping strategies in the police: an empirical investigation. Police Pract Res 23(5):507–522. https://doi.org/10.1080/15614263.2021. 1958683
- Holt TJ, Blevins KR (2011) Examining job stress and satisfaction among digital forensic examiners. J Contemp Crim Justice 27(2):230–250. https://doi.org/10.1177/1043986211405899
- Kelty SF, Gordon H (2015) No burnout at this coal-face: managing occupational stress in forensic personnel and the implications for forensic and criminal justice agencies. Psychiatry Psychol Law 22(2):273–290. https://doi.org/10.1080/13218719.2014.941092
- Kelty SF, McQueen E, Pymont C, Green N (2021) Avoiding Burnout at the Digital Forensics Coalface: targeted strategies for forensic agencies in the management of job-related stress. Forensic Sci Int: Digit Investig 38:301127. https://doi.org/10.1016/j.fsidi.2021.301127
- Krause M (2009) Identifying and managing stress in child pornography and child exploitation investigators. J Police Crim Psychol 24(1):22–29. https://doi.org/10.1007/s11896-008-9033-8
- Larkin M, Thompson AR (2011) Interpretative phenomenological analysis in mental health and psychotherapy research. In: Harper D, Thompson AR (eds) Qualitative Research Methods in Mental Health and Psychotherapy, 1st edn. Wiley, pp 99–116. https://doi.org/10.1002/9781119973249.ch8
- Lazarus RS, Folkman S (1984) Stress, appraisal, and coping. Springer Publishing Company, New York
- Lengelle R, Luken T, Meijers F (2016) Is self-reflection dangerous? Preventing rumination in career learning. Aust J Career Dev 25(3):99–109. https://doi.org/10.1177/1038416216670675
- Leppma M, Mnatsakanova A, Sarkisian K, Scott O, Adjeroh L, Andrew ME, Violanti JM, McCanlies EC (2018) Stressful life events and posttraumatic growth among police officers: a cross-sectional study. Stress Health 34(1):175–186. https://doi.org/10.1002/smi.2772
- Levin AP, Putney H, Crimmins D, McGrath JG (2021) Secondary traumatic stress, burnout, compassion satisfaction, and perceived organizational trauma readiness in forensic science professionals. J Forensic Sci 66(5):1758–1769. https://doi.org/10.1111/1556-4029.14747
- Maguen S, Metzler TJ, McCaslin SE, Inslicht SS, Henn-Haase C, Neylan TC, Marmar CR (2009) Routine work environment stress and ptsd symptoms in police officers. J Nerv Ment Dis 197(10):754–760. https://doi.org/10.1097/NMD.0b013e3181b975f8
- Marshall RE, Milligan-Saville J, Petrie K, Bryant RA, Mitchell PB, Harvey SB (2021) Mental health screening amongst police officers: factors associated with under-reporting of



- symptoms. BMC Psychiatry 21(1):135. https://doi.org/10.1186/s12888-021-03125-1
- Maslach C, Jackson SE (1981) The measurement of experienced burnout. J Organ Behav 2(2):99–113. https://doi.org/10.1002/job.4030020205
- Maslach C, Schaufeli WB, Leiter MP (2001) Job burnout. Annu Rev Psychol 52(1):397–422. https://doi.org/10.1146/annurev.psych.52.1.397
- Massey K, Horvath MA, Essafi S, Majeed-Ariss R (2019) Staff experiences of working in a Sexual Assault Referral Centre: The impacts and emotional tolls of working with traumatised people. J Forensic Psychiatry Psychol 30(4):686–705. https://doi.org/10.1080/14789949.2019.1605615
- McCann IL, Pearlman LA (1990) Vicarious traumatization: a framework for understanding the psychological effects of working with victims. J Trauma Stress 3(1):131–149. https://doi.org/10.1007/BF00975140
- McNeillie N, Rose J (2020) Vicarious trauma in therapists: a metaethnographic review. Behav Cogn Psychother 49(4):426–440. https://doi.org/10.1017/S1352465820000776
- Miller JK, Soffia M, Brewin C, Burchell B (2018) Policing: the job and the life survey 2018 summary report. Police Care UK. Retrieved May 1, 2023, from https://www.policecare.org.uk/wp-content/uploads/PoliceCareUK_TJTL-Report-.pdf
- O'Donovan R, Burke J (2022) Factors associated with post-traumatic growth in healthcare professionals: a systematic review of the literature. Healthcare 10(12):2524. https://doi.org/10.3390/healt hcare10122524
- Office for National Statistics (2018) Crime in England and Wales: year ending September 2022. Retrieved April 28, 2023, from https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/bulletins/crimeinenglandandwales/yearendingseptember2022
- Paton D (2006) Posttraumatic growth in disaster and emergency work. In: Calhoun LG, Tedeschi RG (eds) Handbook of posttraumatic growth: Research & practice. Lawrence Erlbaum Associates Publishers, pp 225–247
- Pearlman LA, Mac Ian PS (1995) Vicarious traumatization: an empirical study of the effects of trauma work on trauma therapists. Prof Psychol Res Pract 26(6):558–565. https://doi.org/10.1037/0735-7028.26.6.558
- Perez LM, Jones J, Englert DR, Sachau D (2010) Secondary traumatic stress and burnout among law enforcement investigators exposed to disturbing media images. J Police Crim Psychol 25(2):113–124. https://doi.org/10.1007/s11896-010-9066-7
- Peters J, Bellet BW, Jones PJ, Wu GWY, Wang L, McNally RJ (2021) Posttraumatic stress or posttraumatic growth? Using network analysis to explore the relationships between coping styles and trauma outcomes. J Anxiety Disord 78:102359. https://doi.org/ 10.1016/j.janxdis.2021.102359
- Powell M, Cassematis P, Benson M, Smallbone S, Wortley R (2015) Police officers' perceptions of their reactions to viewing internet child exploitation material. J Police Crim Psychol 30(2):103–111. https://doi.org/10.1007/s11896-014-9148-z
- Powell M, Cassematis P, Benson S, M., Smallbone, S., & Wortley, R. (2014) Police officers' perceptions of the challenges involved in Internet Child Exploitation investigation. Policing: An International Journal of Police Strategies & Management 37(3):543–557. https://doi.org/10.1108/PIJPSM-08-2013-0080
- Purba A, Demou E (2019) The relationship between organisational stressors and mental wellbeing within police officers: a systematic review. BMC Public Health 19:1286. https://doi.org/10.1186/s12889-019-7609-0
- Queirós C, Passos F, Bártolo A, Marques AJ, da Silva CF, Pereira A (2020) Burnout and stress measurement in police officers: literature review and a study with the operational police stress questionnaire. Front Psychol 11:587. https://doi.org/10.3389/fpsyg.2020.00587
- Rosansky JA, Cook J, Rosenberg H, Sprague JE (2019) Ptsd symptoms experienced and coping tactics used by crime scene investigators

- in the united states. J Forensic Sci 64(5):1444–1450. https://doi.org/10.1111/1556-4029.14044
- Santa Maria A, Wolter C, Gusy B, Kleiber D, Renneberg B (2021) Reducing work-related burnout among police officers: the impact of job rewards and health-oriented leadership. Pol J 94(3):406– 421. https://doi.org/10.1177/0032258X20946805
- Singo C, Shilubane HN (2022) How do police officers cope with stress? A qualitative study. J Police Crim Psychol 37(4):984–992. https://doi.org/10.1007/s11896-022-09556-0
- Slack DP (2020) Trauma and coping mechanisms exhibited by forensic science practitioners: a literature review. Forensic Science International: Synergy 2:310–316. https://doi.org/10.1016/j.fsisyn.2020.10.001
- Smith JA (1996) Beyond the divide between cognition and discourse: using interpretative phenomenological analysis in health psychology. Psychol Health 11(2):261–271. https://doi.org/10.1080/08870449608400256
- Smith JA, Osborn M (2003) Interpretative phenomenological analysis.
 In: Smith JA (ed) Qualitative psychology: A practical guide to research methods. Sage Publications Inc, pp 51–80
- Smith JA, Flowers P, Larkin M (2009) Interpretative Phenomenological Analysis: Theory, Method and Research. SAGE Publications
- Smith JA, Flowers P, Larkin M (2022) Interpretative Phenomenological Analysis: Theory, Method and Research, 2nd edn. SAGE Publications
- Sollie H, Kop N, Euwema MC (2017) Mental resilience of crime scene investigators: how police officers perceive and cope with the impact of demanding work situations. Crim Justice Behav 44(12):1580–1603. https://doi.org/10.1177/0093854817716959
- Sutton L, Rowe S, Hammerton G, Billings J (2022) The contribution of organisational factors to vicarious trauma in mental health professionals: a systematic review and narrative synthesis. Eur J Psychotraumatol 13(1):2022278. https://doi.org/10.1080/20008198. 2021.2022278
- Tedeschi R, Calhoun L (1995) Trauma & transformation: growing in the aftermath of suffering. SAGE Publications, Inc. https://doi. org/10.4135/9781483326931
- Tehrani N (2016) Extraversion, neuroticism and secondary trauma in Internet child abuse investigators. Occup Med 66(5):403–407. https://doi.org/10.1093/occmed/kgw004
- Thomas DL (2022) Interpretative phenomenological analysis of burnout among British police officers. CSTP 3:35–50. https://doi.org/ 10.53074/cstp.2022.32
- Tomyn AJ, Powell MB, Cassematis P, Smallbone S, Wortley R (2015) Examination of the subjective well-being of Australian internet child exploitation investigators. Aust Psychol 50(3):203–211. https://doi.org/10.1111/ap.12119
- Tsirimokou A, Kloess JA, Dhinse SK (2022) Vicarious post-traumatic growth in professionals exposed to traumatogenic material: a systematic literature review. TVA. https://doi.org/10.1177/15248380221082079
- Velazquez E, Hernandez M (2019) Effects of police officer exposure to traumatic experiences and recognizing the stigma associated with police officer mental health: a state-of-the-art review. Policing: An International Journal 42(4):711–724. https://doi.org/10.1108/PIJPSM-09-2018-0147
- Wortley R, Smallbone S, Powell M, Cassematis P (2014) Understanding and managing the occupational health impacts on investigators of internet child exploitation. Retrieved May 3, 2023, from https://discovery.ucl.ac.uk/id/eprint/1447785/1/Wortley_Understanding% 20and%20Managing%20the%20Occupational%20Health%20Imp acts%20on%20Investigators%20of%20Internet%20Child%20Exploitation.pdf

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