THE IMPACT OF WORKING IN A HIGHLY STRESSFUL ENVIRONMENT ON WELLBEING

by

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Thesis Overview

This thesis consists of two chapters: (i) a literature review, and (ii) an empirical paper.

The literature review explores contributing factors for burnout for mental health nurses working in mental health hospitals. The current knowledge base often conflicts and varies regarding contributing factors, with a need for a more established knowledge base focusing on specific work environments required. A systematic literature review used four relevant databases and reviewed 12 studies. Although multiple factors were identified to contribute to burnout for this group, high stress was the most significant factor. The study highlighted the complex nature of burnout, and the influence that the organisation can have on its development.

The empirical paper explores the daily experiences of Forensic Scene Investigators (FSIs) and the impact that this job has on their lives. Current research highlights how intensely stressful being a police officer can be and the resulting increased risk of stress-related disorders and reduced quality of life. Despite this, there is little research, particularly of a qualitative nature, into FSIs, despite them facing similar stressors. An IPA methodology was chosen, using semi-structured interviews and a purposeful sampling method with one constabulary. Themes that emerged included the intense nature of the role, including the psychological impact it had on FSIs, and how this is compounded by organisational factors, including working processes, and feeling undervalued. These findings highlight the personal sacrifice FSIs often make, and the importance of the organisation in supporting them.

Differences between Chapter 1 and Chapter 2

There is some variation between the topic and focus of Chapter 1 in comparison to Chapter 2. Originally, the empirical paper in Chapter 2 explored a different question, more in line with the themes and participant group of Chapter 1. Specifically, this original focus related to mental health nursing staff's experiences of providing compassionate care to clients

within a secure forensic mental health hospital. From this, the topic of exploring contributing factors for burnout in mental health nursing staff working in mental health hospitals was chosen for the literature review. However, after starting the literature review, the decision was made by the relevant host organisation to withdraw their support for the empirical study. Following this, the current empirical study was available for exploration and therefore taken up, looking at the lived experiences of Forensic Scene Investigators. As such, there is some variation regarding the working environment and participant group within these two papers.

Despite this, there are connections between these two papers. Both mental health nurses and Forensic Scene Investigators are classed as public servants who work for the public sector. Public sector workers face many challenges within the role, including intense pressure, such as workforce shortages, increasing demand for services, and low funds amid high costs. These pressures have resulted in healthcare and police workers in particular feeling exhausted and overstretched with low morale and poor wellbeing (House of Lords, 2022). As a result, research is clear that both groups of staff experience high levels of burnout. Both papers together explore the psychological impact of working in these environments, specifically by exploring the biggest stressors for these groups, and, in Chapter 2, the potential impact of these stressors.

Acknowledgements

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Chapter 1

Literature Review

Contributing Factors to Burnout for Mental Health Nurses Working in Hospitals: A Systematic Review

Abstract

Burnout has a significant negative impact on staff wellbeing, quality of work, and organisational outcomes, with prevalence rates being particularly high amongst mental health nurses. The current burnout literature is contradictory in terms of its findings. Therefore, a more established knowledge base has been called for, with some literature reviews starting to focus on staff in specific working environments. This literature review therefore aims to add to the current literature by exploring existing research into contributing factors for burnout for mental health nurses working in mental health hospitals. Following a systematic search of four relevant databases, 12 quantitative articles were identified. Of these, 11 used a correlational design and were assessed for quality using the Quality Appraisal Checklist (NICE, 2012). The remaining study used a between-groups cross-sectional design, and so the Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies (National Heart, Lung, and Blood Institute, 2013) was used. Organisational factors, such as high role conflict and ambiguity, high caseload, low autonomy and low support, were found to contribute significantly towards burnout, as well as violence and high stress. There were inconsistent results regarding personal characteristics, such as gender and age. Inconsistencies may be accounted for by cultural variations and other factors, such as stress playing a more significant role in developing symptoms of burnout. Findings are discussed in relation to theoretical and practical implications, as well as directions for future research.

Introduction

Professional Burnout and Other Similar Concepts

Burnout is a continued psychological state (Maslach, 2006) that develops from an accumulation of ongoing occupational stressors over time. It can develop within a wide range of occupations (Leiter & Schaufeli, 1996), including Information System professionals (Huarng, 2001), teachers (Capel, 1991), and healthcare professionals (De Hert, 2020). Burnout is widely recognised, so much so that in 2019, it was included within the 11th Revision of the International Classification of Diseases (ICD-11) as an occupational phenomenon (World Health Organization, 2019). It is described as a multidimensional model with three main dimensions: (i) emotional exhaustion, where one's emotional resources are depleted by the chronic demands and needs of another, (ii) an unfeeling and impersonal response towards patients' care, and (iii) feeling incompetent and unsuccessful within work. These dimensions can result in staff feeling overburdened, paranoid of others, taking increased risks unnecessarily, and being resistant to change. At work, this can result in a decrease in quality of care, increase in mistakes, problematic staff dynamics, and a reduction in staff wellbeing (Maslach & Jackson, 1981).

Over time, other concepts related to burnout have also been identified and evolved, including 'secondary traumatic stress' or 'secondary traumatic stress disorder'. This concept differs from burnout, however, as burnout occurs following a broad range of occupational stressors in the workplace (Maslach et al., 2001), whereas secondary traumatic stress occurs following a specific type of stressor, that is, an indirect exposure to a traumatic event, such as hearing about a traumatising event experienced by another, rather than experiencing it directly themselves. The symptoms experienced in the context of secondary traumatic stress are also similar to those of PTSD. This phenomenon has been referred to by other terms over

the years, including ‘secondary victimisation’, ‘co-victimisation’, ‘secondary survivor’, ‘companion stress’, and ‘compassion fatigue’ (Figley, 1993).

Having these varying concepts, however, has become problematic in research. Scholars continue to disagree on what the terms specifically mean (Newell et al., 2015), with some researchers believing that they are all simply ‘burnout’ (Maslach & Jackson, 1984), and using the terms interchangeably (Meadors et al, 2009). Others however argue that the terms differ in definition and symptoms (Cragun et al., 2016; Newell et al., 2016; Rauvola et al., 2019). This disagreement has negatively impacted the research around these concepts. Branson (2019) for example completed a literature review on the term ‘vicarious trauma’, and found that the term was not operationalised. This meant that it was often incorrectly used, which then negatively impacted the validity and reliability of the results. Rauvola et al. (2019)’s qualitative review synthesised and summarised literature on ‘compassion fatigue’, ‘secondary traumatic stress’, and ‘vicarious trauma’, and struggled to integrate the findings, due to construct ambiguity. These concepts are therefore often misunderstood by those treating clients who have experienced trauma (Rothschild & Rand, 2006), and those diagnosing burnout (Newell et al., 2015). This brings into question the potential effectiveness of the care provided and health outcomes used for those with burnout and trauma.

Contributors to Burnout

Burnout is linked to specific working conditions and organisational contexts, with the long-term impacts of burnout including lower-quality work, an increase in mistakes, poorer problem-solving skills, absenteeism, and lower organisational commitment (Maslach, 2006). For staff, it can lead to physical health symptoms, such as fatigue, insomnia, headaches, gastrointestinal problems, and cardiovascular issues (Kahill, 1988; Melamed et al., 2006; Salvagioni et al., 2017), as well as mental health difficulties, including depressive symptoms and increased anxiety (Koutsimani et al., 2019; Salvagioni et al., 2017). All of these further

impact on working conditions, the work environment, and both short- and long-term illness-related absenteeism, as well as poor physical or mental health in staff. A large amount of research has aimed to establish what the contributing factors to burnout are, with factors such as age, high workload, work environment, low reward or salary, lack of fairness in the workplace, high discrimination and conflict, and low social support being identified (Dall'Ora et al., 2020; Duquette et al., 1994; Gribben & Semple, 2021; Maslach, 2006; Maslach & Leiter, 2005; Peterson, 2008). Despite this, many studies have found that the relationship between the contributing factors and burnout was often complex and confusing (e.g. Duquette et al., 1994). The list of potential risk factors highlighted is very large, and many of the papers directly contradicted each other in their findings. Sorenson et al. (2016) completed an integrated literature review exploring 'compassion fatigue' in health providers and identified a lack of clarity and consistency regarding results. This made it difficult to accurately compare studies and their conclusions. The large number of papers published, and complex nature of the development of burnout, has meant that for some, searching for specific answers may have seemed an overwhelming and possibly time-consuming task. For service providers looking to research for help in supporting their staff, concentrating on literature reviews that focus on organisations and workforces like their own may be the most helpful way to identify and avoid missing relevant results, and to understand and make use of the broad research available.

Burnout in Mental Health Nurses

Although any staff member can present with burnout, healthcare staff appear to be at particular risk. De Hert (2020) reported prevalence estimations to be around 20%, with many negative consequences clearly identified within research, some of which are profoundly problematic for staff, patients and the sector as a whole. Poor work performance caused by burnout (Dyrbye et al., 2019), for example, can lead to serious care outcomes, including

poorer quality of care, reduced staff concern for patients, increased risk of medical errors, avoidable casualties and increased human suffering (Abushaikha & Saca-Hazboun, 2009; Maslach, 2006; Montgomery et al., 2011; World Health Organization, 2022). In addition to this, organisations can experience significant economic losses, prosecutions and closure of care providers, as well as increased staffing pressures, caused by the increased staff turnover, decreased job satisfaction, and increased staff conflict (Care Quality Commission, 2022; Dolan, 1987; Maslach, 2006; World Health Organization, 2022). These outcomes show the prevailing concern burnout in healthcare staff is, particularly given how relied upon they are, being described as "the most valuable resource for health" (Joseph & Joseph, 2016, p.71).

For mental health professionals, research has shown that burnout can be especially high. Morse et al. (2012) reported that 21%-67% of the workforce may be experiencing high levels of burnout. Oddie and Ousely (2007) assessed the levels of burnout in 115 nursing staff, and nine occupational therapists working across three forensic medium secure wards, and found that 54% reported high emotional exhaustion, 35% had high depersonalisation, and 61% had low personal accomplishment. O'Connor et al. (2018)'s systematic review estimated burnout levels in mental healthcare nurses, doctors, psychologists, occupational therapists, and social workers across 33 different countries, and found that the average mental health professional had 'high' emotional exhaustion, 'moderate' depersonalisation, and 'high' personal accomplishment. Forty-three percent of sickness absences for mental healthcare staff in the NHS are caused by work-related stress (Mental Health Taskforce Strategy, 2016).

Research has found that mental health nurses seem to be particularly vulnerable. López-López et al. (2019) completed a systematic review and found that 15%-25% of 868 mental health nurses reported high burnout. Imai et al. (2004) compared prevalence rates of 423 community psychiatric nurses to 435 physical healthcare nurses in Japan and found that rates were significantly higher for community psychiatric nurses (59.2% versus 51.5%). The

difficulty of mental health nurses' job roles has been clearly documented within research. Gunasekara et al. (2014) emphasised the demanding nature of it, with nurses expected to not only care for and treat vulnerable individuals who suffer from mental illnesses, but also attend meetings, manage administrative tasks, dispense medication, be involved in the admission of new patients, and carry out other service-level tasks. Foster et al. (2020) highlighted their high workloads, but lack of organisational support to manage this. This means that they can often spend most of their time completing non-clinical tasks, and managing the ward environment, rather than supporting and caring for their patients (Sabella & Fay-Hillier, 2014), or developing therapeutic relationships with them (Fourie et al., 2005). Given the importance of the quality of the therapeutic relationships with patients, and its link to patient outcomes, staff burnout can therefore have a significant indirect effect on patient recovery and quality of care.

Bullying from colleagues has also been cited as a significant stressor within the role. Foster et al. (2020) found that of 473 mental health nurses working across different mental health services in Australia, 71% reported staff conflict, and 55% reported staff bullying as notable stressors. Although bullying has been found to be pervasive across all areas of nursing (Cleary et al., 2010), mental health nurses specifically appear to be a vulnerable group as they have to face additional occupational challenges in regards to colleagues. Sabella and Fay-Hillier (2014) discussed how caring for a stigmatised group (those with mental illness) has resulted in mental health nurses being stigmatised by association. Health Education England (2017) reported that nurses from other specialisms often view mental health nurses as inferior, due to a belief that mental health nurses lack an advanced knowledge base and skillset and because psychiatric nursing is viewed less favourably than other specialisms. It seems therefore that for those not in the profession, the role of a mental health nurse is often not fully respected, understood or valued as much as other areas of

nursing, and as such stigmatised (Halter, 2008). Health Education England (2017) further reported concerns that this may reduce the number of applicants, further contributing towards already existing staffing shortages within this profession. As the number of mental health nurses in employment within the UK has continually dropped since 2010, despite the number of total nurses (in all disciplines) steadily increasing (Health Education England, 2017), this is particularly concerning for the sector.

Mental Health Nurses in Hospitals

As research has demonstrated that burnout is an occupational stress, studies have started to focus on how burnout may start to develop in different working environments. This is particularly important as most research up to this point explored burnout from an occupational perspective (i.e. all mental health nurses viewed similarly, whereas actually mental health nurses can work in various settings, including in the community, hospital and forensic settings, which can vary greatly).

Some reviews have already been completed. Edwards et al. (2001)'s literature review explored stress and burnout in community mental health nurses and found community-specific contributing factors, including increased workload and administration, inappropriate referrals, safety issues, and lack of supervision. Dickinson and Wright (2013)'s literature review focused on forensic settings, and found that the main stressors were interpersonal conflicts, workload and lack of involvement in decision-making. These reviews highlight how different work environments can have their own specific factors that contribute towards burnout, which may not be relevant within other environments. It does not appear, however, that hospital settings have been focused on for reviews. Despite this, research has identified how hospitals can be stressful. Montgomery et al. (2011) reported that nurses in hospitals are more likely to work with the most unwell and challenging patients, particularly compared to community nurses. These patients' needs, which often cannot be supported within

community settings, generally require further and more intensive support within hospitals and can include those who have the most severe symptoms or illnesses, a history of violence, committed serious offences, and a longer and more complex history of psychiatric treatment (Huband et al., 2018). These individuals are also more likely to present as aggressive, with mental health nurses more likely to face violence when working in hospitals compared to the community (Dean et al., 2021). Nolan et al. (1999) found that 81% of hospital-based mental health nurses have experienced violence during their careers, compared to 50% of community-based mental health nurses. Workplace violence has been associated with psychological symptoms, including fear, anger, depression, anxiety, helplessness, loss of self-esteem, and PTSD, as well as increased staff turnover (Dean et al., 2021). Facing both possible violence and increasing work demands can result in mental health nurses taking time off or leaving their jobs, resulting in a disruption in continuity of care (Boyer & Bond, 1999), and a reduction in patient engagement (Puntis et al., 2015). Fielding and Weaver (1994) also reported that mental health nurses working within mental health hospitals rated their work environment as being lower for supervisor support, autonomy, innovation, and commitments to their jobs, when compared to mental health nurses working in the community. Sørgaard et al. (2007) further found that mental health nurses working in hospitals reported an increased lack of control over their work conditions, and less social relationships than mental health nurses working in the community. This is particularly noteworthy, as research has identified that some of these factors can contribute to burnout, and towards a reduction in staff morale, attention at work, and empathy, leading to an increase in mistakes, staff turnover, and a reduction in engagement with patients, patient-centred care, patient satisfaction, quality of care, and recovery rates (Bakker & Demerouti, 2007; Passalacqua & Segrin, 2012; Salyers et al, 2015).

Present Review

Given the research highlighting the potentially stressful nature of hospital-working, and the need for more environment-specific reviews in order to focus the burnout literature, making it more generalisable to specific workplace settings, this review aims to identify the main contributing factors related to burnout for mental health nurses working in mental health hospitals. To improve the quality of this review, only articles exploring the concept of 'burnout' were included, and other concepts, including 'vicarious trauma' were excluded.

It is hoped that this review will highlight the main contributing factors for burnout in hospital-based mental health nurses. Given the complex nature of how burnout develops, it is also hoped that this review may be able to shed some light on possible secondary factors, and how these relate to burnout. For clinicians and organisations hoping to support their staff, this will hopefully clarify potential interventions to reduce burnout and organisational changes that could be made to support with this.

Method

Search Strategy

Booth (2006) identified that in order for a systematic literature search to be assessed by others for quality and replicability, appropriate standards need to be used when completing the search. Therefore, the STARLITE mnemonic (sampling strategy, type of studies, approaches, range of years, limits, inclusions and exclusions, terms used, electronic sources; Booth, 2006) was used within this search to help convey the steps undertaken.

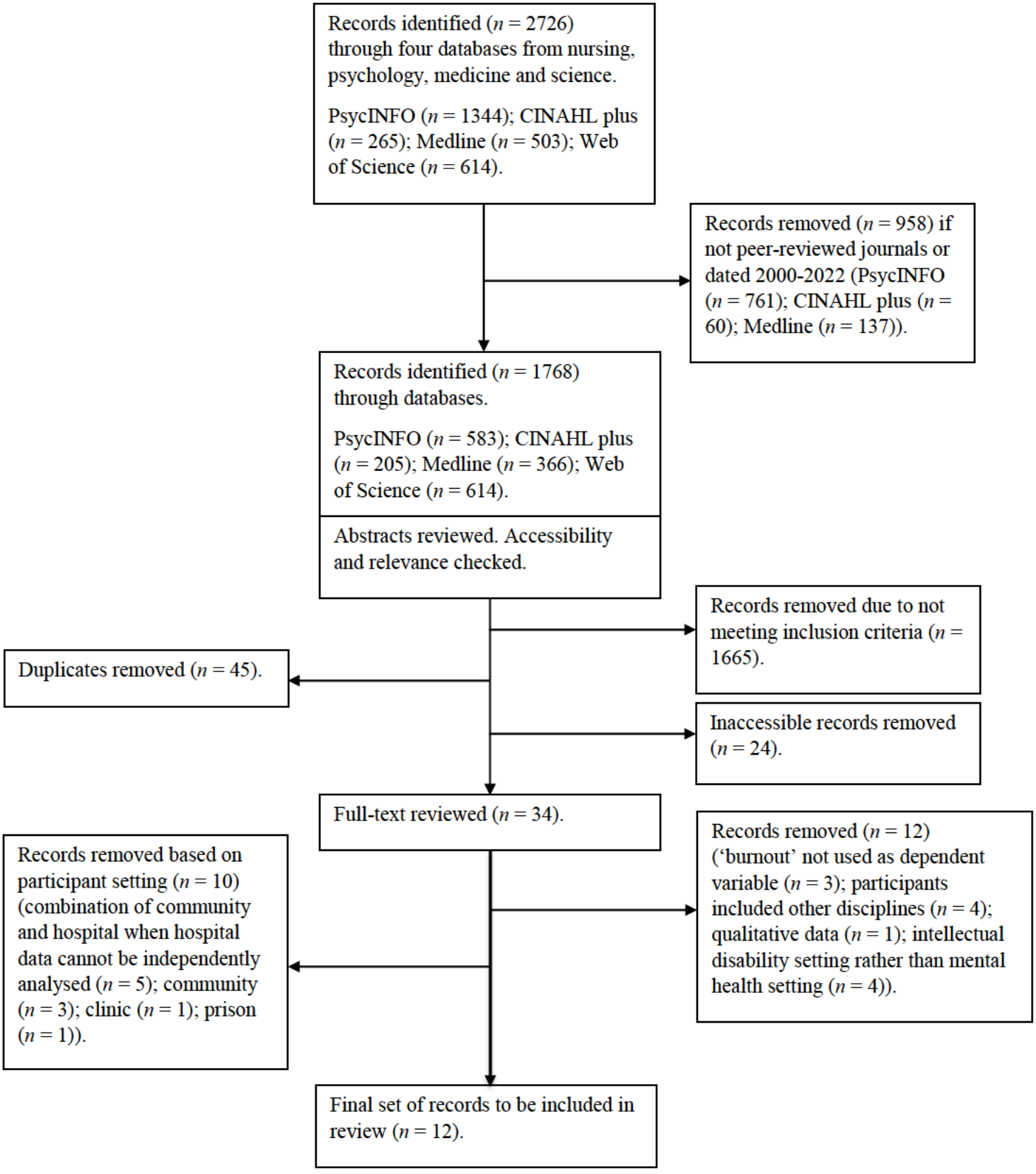
A scoping review was first completed to assess the quality and quantity of existing studies relevant to the research question. This scoping review exposed problems related to the terminology used within the search, indicating that the original terminology was too narrow. The subsequent search strategy was therefore broadened to capture all relevant search terms. For the final search, four electronic databases were used, namely PsycINFO, CINAHL plus,

Medline, and Web of Science, due to their relevance to the subject matter. The search strategy included terms that related to: (i) mental health nurses, (ii) mental health services, and (iii) burnout, with papers having to include all three topics to be initially identified. Initially, other nursing staff were included within this search, such as healthcare assistants, as well as other concepts related to burnout, such as vicarious trauma. However, papers focusing on other nursing staff and/or other concepts were very limited, and so qualified mental health nurses and burnout were focused on to improve consistency. The search terms were adapted for each database to suit the required database's search style in order to improve the sensitivity of the search, and ensure all relevant papers were identified (e.g. relevant suggested subject terms were ticked and exploded when searching on PsycINFO and CINAHL plus, relevant terms were mapped to the subject heading and exploded when searching using Medline, actual terms were used with Web of Science, and relevant Boolean operators were used with all four databases) (see Appendix A for full details of the search). From this search, the abstracts from all papers were screened to identify whether the paper was relevant.

Systematic Screening Process

Figure 1

Basic Figure of Systematic Search



After the search was completed, and the papers screened, 34 relevant studies were identified. The articles were therefore narrowed down further, with those reporting on studies that used participants from multiple disciplines being excluded. The articles were then reviewed in full to ensure that they met the inclusion criteria. In addition to this, only one of the studies identified reported qualitative data, whereas the rest reported quantitative data, and so the former was removed to improve the consistency across the final set of articles, resulting in 12 articles being included in the review.

Inclusion/Exclusion Criteria

The initial search was conducted before the Covid pandemic, however, another search was re-run in 2023 to identify any new, more recently published papers that may add to the results. During this search, any papers that were focusing on burnout specifically in relation to the Covid pandemic were excluded. This decision was made as research has identified that the Covid pandemic brought about its own unique set of associated stresses, including the very high number of deaths, the risk of catching the infection, and the awareness of possible future waves (Leo et al., 2021). It would be difficult to separate out these factors as probable causes of burnout outside of the Covid pandemic, and report them alongside variables found in other non-Covid studies, especially when the paper has focused on Covid-specific variables. For this study, no new papers were identified. If this analysis were to be run again, however, and new papers identified, these should be individually reviewed to assess whether there are any pandemic-related confounding or independent variables (such as those listed above), and if so, these should be assessed as to whether they can be compared with other non-pandemic factors.

On completing the search, too many papers were identified that were appropriate for the review, and so at this point, the focus of the review was narrowed further to only include mental health hospitals in line with its aims (i.e. other settings, such as prisons and hospitals

solely caring for those with learning disabilities, were excluded). The reason for this was again to improve consistency across the studies, particularly given the role of organisational factors in the development of burnout. Other settings such as those caring solely for intellectual disability, and prisons, can have additional/different organisational requirements/needs that are not as significant, or not present within other hospital settings. The final inclusion and exclusion criteria used are shown in Table 1.

Table 1

Final Inclusion and Exclusion Criteria Used

Final inclusion criteria	Final exclusion criteria
i) The study's aims or findings must explore factors that may contribute towards the development of burnout within the participant population. ii) All participants must be working within a role that is equivalent to a mental health qualified nurse. iii) All participants must be working within a mental health hospital. If only some participants work within a mental health hospital, the data for these participants must be able to be reviewed separately from all other participants (and only these data will be used within the review). iv) Studies must have been published between 2000-2022 and be peer-reviewed.	i) Full paper is not accessible to the author. ii) Full paper is not in English. iii) The mental health hospital that the participants work within consists entirely of the following patient groups/settings: intellectual disability, prison, outpatient, clinic. iv) Any studies focusing on the Covid pandemic only.

Of the 12 articles, 11 used participants working only in mental health hospital settings, whereas one study used participants working within a mental health hospital or community setting (McTiernan & McDonald, 2015). This study separated the data for both participant groups, and so only the mental health hospital data were included in this review. All 12 articles included in this review are presented and summarised in Table 2. In addition, the studies have been compared with regards to their environmental setting and context. This provides an overview of shared similarities and differences in terms of possible environmental factors that contribute to the development of burnout (see Table 3)

Table 2

Summary of Main Characteristics of the Final Set of Articles

Author	1. Levert et al. (2000)	2. Jenkins & Elliott (2004)	3. Hamaideh (2011)	4. Madathil et al. (2014)	5. McTiernan & McDonald (2015)	6. Itzhaki et al. (2018)	7. Yang et al. (2018)	8. Berry & Robertson (2019)	9. Kim & Kweon (2020)	10. Payne et al. (2020)	11. Kobayashi et al. (2020)	12. Alqahtani et al. (2020)
Title	Burnout in psychiatric nurses: Contributions of the work environment and a sense of coherence	Stressors, burnout and social support: Nurses in acute mental health settings	Burnout, social support, and job satisfaction among Jordanian mental health nurses	Burnout in psychiatric nursing: Examining the interplay of autonomy, leadership style, and depressive symptoms	Occupational stressors, burnout and coping strategies between hospital and community psychiatric nurses in a Dublin region	Mental health nurses' exposure to workplace violence leads to job stress, which leads to reduced professional quality of life	Incidence, type, related factors, and effect of workplace violence on mental health nurses: A cross-sectional survey	Burnout within forensic psychiatric nursing: Its relationship with ward environment and effective clinical supervision?	Psychological capital mediates the association between job stress and burnout among Korean psychiatric nurses	Burnout and job satisfaction of nursing staff in a South African acute mental health setting	Workplace violence and its effects on burnout and secondary traumatic stress among mental healthcare nurses in Japan	Burnout syndrome among nurses in a psychiatric hospital in Dammam, Saudi Arabia
Aim	1. Measure burnout levels for psychiatric nursing staff, according to Maslach and Jackson's (1996) three dimensions of burnout. 2. Measure the relationship between, and impact of, the various factors in the work environment and role of the nursing	1. Investigate and compare the levels of stressors and burnout experienced by qualified and unqualified nursing staff 2. Examine relationships between stressors and burnout for the sample as a whole 3. Assess the impact of social support on burnout	1. Investigate the levels of burnout dimensions among Jordanian nurses compared to the normative values 2. Investigate the relationships among burnout categories, social support, job satisfaction, and some demographic	1. Understand possible environmental factors that might help protect nurses from the effects of burnout	1. Identify the variety and severity of stressors of nurses in a Dublin region 2. Compare occupational stress, coping strategies and burnout of hospital nurses with community nurses	1. Investigate the effect of job stress and exposure to violence on nurses' quality of life	1. Investigate the incidence and type of workplace violence 2. Explore factors related to workplace violence 3. Investigate the level of job burnout among nurses and its association with the incidence of workplace violence 4. Explore what types of coping	1. Determine the extent to which experience of burnout in forensic psychiatric nursing staff is predicted by the perceived effectiveness of clinical supervision and the ward environment	1. Investigate the mediating effect of psychological capital on the relationship between job stress and burnout	1. Determine the prevalence of levels of burnout and degree of job satisfaction for the current nursing staff at Stikland State Psychiatric Hospital 2. Establish whether these experiences are associated with certain demographic variables	1. Investigate the prevalence of workplace violence and its effects on burnout and secondary traumatic stress among nurses in Japan	1. Determine the prevalence of burnout syndrome and the factors associated with it among nurses working in a psychiatric hospital

	staff on burnout. 3. Determine the role that the Sense of Coherence plays in the relationship between the work environment and burnout levels	(main effect) and stressor–burnout relationships (buffering).	and work-related characteristics of Jordanian nurses working in mental health settings 3. Investigate the variables that best predict burnout dimensions among Jordanian nurses working in mental health settings				strategies nurses used and their suggestions					
Design	Cross-sectional correlational design.	Cross-sectional correlational design.	Descriptive correlational cross-sectional design.	Cross-sectional correlational design.	Between-subjects design.	Descriptive cross-sectional correlational study.	Cross-sectional correlational study.	Cross-sectional correlational design.	Descriptive cross-sectional correlational design.	Cross-sectional correlational design.	Cross-sectional correlational design.	Cross-sectional correlational design.
Sample (incl. ward description if available)	94 nurses (wards included medium and long term, voluntary and involuntary, acute assessment and referral)	57 nursing staff (acute adult wards)	181 nurses (wards included acute and chronic)	89 nurses (wards included adult, forensic, child/adolescent, rehabilitation, "other unit")	36 nurses	114 nurses (wards included emergency, acute illness, rehabilitation, forensic, psychogeriatric, long-term – open and closed)	245 nurses (wards included male and female PICU, low economic and homeless, outpatient)	137 nursing staff (wards were medium secure forensic)	108 nurses	127 nurses (wards included acute, geriatrics, therapeutic, and chronic)	599 nursing staff	395 nurses
Independent Variables measured	1. Workload and lack of collegial support	1. Stressors 2. Demographics (including job title,	1. Social support 2. Job satisfaction 3.	1. Transformational leadership 2. Autonomy	1. Stressors 2. Coping strategies	1. Violence exposure 2. Job stress (over the last month)	1. Workplace violence	1. Clinical supervision 2. Ward environment 3.	1. Job stress 2. Psychological capital	1. Demographics (including age, gender, rank, ward	1. Wellbeing 2. Psychological distress 3. Alcohol	1. Demographic (including age, gender, nationality,

	2. Role conflict and role ambiguity 3. Sense of coherence	length of employment on current ward, length of employment in the nursing profession, gender and age)	Demographics and work-related information	3. Depressive symptoms				Demographics (included age, gender, pay banding, and duration of employment within the unit)		category, years of experience, duration of employment at hospital, and full or part-time) 2. Job satisfaction	Use Disorder 4. Anger related to harmful experience 5. Workplace violence	occupation, marital status, education level, shift schedule, daily working hours, and smoking status)
Results	Emotional exhaustion and depersonalisation were significantly correlated with sense of coherence, workload, collegial support, role conflict, and role ambiguity. Personal accomplishment was correlated with role conflict. Sense of coherence and workload can account for a large proportion of emotional exhaustion and depersonalisation	Higher stressor scores were associated with higher burnout. Burnout was significantly negatively correlated with co-worker support	Burnout correlated significantly with job satisfaction, social support, gender, experiencing violence, caseload, stress, intention to leave job, age, participation in mental health workshops, and psychiatric experience.	Burnout was significantly negatively correlated with role autonomy, and transformational leadership	Depersonalisation was higher and personal accomplishment lower in hospital nurses than community nurses. Workload and home-work conflict were found to significantly predict burnout	Violence exposure was not directly associated with burnout, but caused work stress, which led to burnout	Burnout increased with age, professional title, years of employment, and frequency of workplace violence	Ward environment (how staff feel, how therapeutic the ward feels, and how well service users relate to each other) are more predictive of burnout than clinical supervision	Burnout was significantly correlated with job stress, and psychological capital. Psychological capital was found to reduce job stress and burnout	Higher levels of burnout were significantly associated with lower job satisfaction. No significant relationship between burnout and gender, rank or years of experience	Burnout was significantly correlated with workplace violence	Burnout was significantly associated with being of a Saudi nationality (within Saudi Arabia), single status, and being an ex-smoker

Table 3

Overview of Environmental Factors and Context of the Included Studies

Continent	***North America***	***Africa***		***Europe***			***Asia (Middle East)***			***Asia (East Asia)***		
Study	Madathil et al. (2014)	Levert et al. (2000)	Payne et al. (2020)	Jenkins & Elliott (2004)	McTiernan & McDonald (2015)	Berry & Robertson (2019)	Hamaideh (2011)	Itzhaki et al. (2018)	Alqahtani et al. (2020)	Yang et al. (2018)	Kim & Kweon (2020)	Kobayashi et al. (2020)
Country	USA	South Africa	South Africa	England	Ireland	England	Jordan	Israel	Saudi Arabia	China	South Korea	Japan
Hospital Setting	State psychiatric	Psychiatric government; general government	Psychiatric hospital	Unclear	Unclear	State forensic psychiatric hospital	Ministry of Health, Royal Medical Services, private sector	Mental health center	Public psychiatric hospital	Mental health hospital	Psychiatric hospitals	Psychiatric inpatient; outpatient; day-treatment centers
Ward Type	Adult; forensic; child /adolescent; rehabilitation ; other units	Medium-term voluntary; medium- and long- term involuntary; acute assessment and referral	Male acute; female acute; geriatrics; therapeutic; chronic	Acute adult mental health wards	Unclear	Medium secure	Acute; chronic	Emergency; rehabilitation ; psychogeriatric; long-term care; acute; forensic	Unclear	PICU male adults; PICU female adults: PICU mixed; low economic and homeless; outpatient; others	Unclear	Acute; others
Patient Groups	Licensed staff nurses	Fully qualified nurses	Nurses; nursing assistants	Fully qualified nurses; nursing assistants	Psychiatric nurses	Full time front line nursing staff	Nurses working in mental healthcare settings	Nurses	Registered nurses	Registered nurses	Psychiatric nurses	Mental health nurses; mental health assistant nurses
Results	Burnout was significantly negatively correlated with role autonomy, and	Emotional exhaustion and depersonalis ation were significantly correlated	Higher levels of burnout were significantly associated with lower job	Higher stressor scores were associated with higher burnout. Burnout was	Depersonalis ation was higher and personal accomplishm ent lower in hospital	Ward environment (how staff feel, how therapeutic the ward feels, and	Burnout correlated significantly with job satisfaction, social support,	Violence exposure was not directly associated with burnout, but caused work stress,	Burnout was significantly associated with being of a Saudi nationality (within Saudi	Burnout increased with age, professional title, years of employment, and	Burnout was significantly correlated with job stress, and psychological capital.	Burnout was significantly correlated with workplace violence.

	transformational leadership	with sense of coherence, workload, collegial support, role conflict, and role ambiguity. Personal accomplishment was correlated with role conflict. Sense of coherence and workload can account for a large proportion of emotional exhaustion and depersonalisation	satisfaction. No significant relationship between burnout and gender, rank or years of experience.	significantly negatively correlated with co-worker.	nurses than community nurses. Workload and home-work conflict were found to significantly predict burnout.	how well service users relate to each other) are more predictive of burnout than clinical supervision.	gender, experiencing violence, caseload, stress, intention to leave job, age, participation in mental health workshops, and psychiatric experience.	which led to burnout.	Arabia), single status, and being an ex-smoker.	frequency of workplace violence.	Psychological capital was found to reduce job stress and burnout.	
Similarities	N/A	1. Both papers used staff from acute wards and longer-term wards. 2. Both found burnout levels were high. 3. Both papers were from South Africa.		1. All used the Maslach Burnout Inventory. 2. All from countries within the British Isles.			1. All use registered nurses only.			1. Yang et al. and Kobayashi et al. both use predominantly acute settings. However it is unclear whether Kim & Kweon differ re this. 2. The types of hospitals appear to be similar. 3. Yang et al. and Kobayashi et al. found violence contributed to burnout.		
Differences	N/A	1. Inclusion of nursing assistants in Payne et al. 2. Different burnout measures: Levert et al. used the Maslach Burnout Inventory and Payne et al. used the Copenhagen Burnout Inventory.		1. Both Jenkins & Elliott and Berry & Robertson used nurses and nursing assistants, whereas McTiernan & McDonald doesn't. 2. Jenkins & Elliott and Berry & Robertson were completed in England, whereas McTiernan & McDonald was in Ireland. 3. Berry & Robertson used forensic staff, Jenkins & Elliott didn't and it is unclear with McTiernan & McDonald.			1. Countries vary. 2. Although the studies appear to have similar hospitals, there is little information and Hamaideh included additional hospital types. 3. The wards appear to vary between studies, although lack of information makes this difficult to identify. 4. Variation with findings, such as Hamaideh finding that violence contributes to burnout,			1. Kobayashi et al. uses nurses and assistant nurses. 2. Different countries. 3. All studies used different burnout inventories: Yang et al. used the Maslach Burnout Inventory, Kim & Kweon used the Burnout Scale and Kobayashi et al. used the Professional Quality of Life Scale.		

				but Itzhaki et al. finding that there was no direct relationship. 5. Variation with burnout inventory used: Itzhaki et al. used the Professional Quality of Life Scale and Hamaideh and Alqahtani et al. used the Maslach Burnout Inventory.	
Interpretation	N/A	These studies appear comparable regarding possible environmental factors, as they have similar hospital types, ward types and countries completed. Differences however in findings could relate to different measures used or the inclusion of nursing assistants.	Studies may have comparatively different workplace environments i.e. different types of wards and participants used. Removing McTiernan & McDonald may alleviate some of these potential confounding variables, however the difference in ward would still not be accounted for.	Due to some of the lack of descriptive information about the study, it is difficult to highlight the differences within some of the findings. It could be due to different environmental factors e.g. wards or due to variations with measuring the variables.	For environmental factors, these studies appear more comparable. Although the three scales varied: Yang et al. and Kim & Kweon had high reliability and validity scores for their scales, so again these scores can be more comparable. However the lack of clarity regarding the wards used in Kim & Kweon's study means that this should be done with caution.

Across the 12 articles, the majority of the participants used were mental health nurses, with nine of the studies using only mental health nurses as their participant group, whereas three of the studies used both mental health nurses and either healthcare support workers (Berry & Robertson, 2019), nursing assistants (Jenkins & Elliott, 2004), or mental health assistant nurses (Kobayashi et al., 2020). It is unclear from the papers what the job responsibilities of these workers were, and whether they differed. Therefore, within this review, they have been listed as separate roles. Countries in which the studies took place varied, and represented Europe, Africa, Asia, and the United States. The wards participants worked on also varied, and included short-, medium-, and long-term wards, voluntary and involuntary, assessment, rehabilitation, and forensic wards, and child/adolescence, adult, and geriatrics. Six of the articles used participants from a mixture of these wards, whereas two used participants from one type of ward only, with Berry and Robertson (2019) using a forensic ward, and Jenkins and Elliott (2004) using acute adult wards. Four studies did not identify the wards that the participants worked on (Alqahtani et al., 2020; Kim & Kweon, 2020; Kobayashi et al., 2020; McTiernan & McDonald, 2015). The number of participants that were used for each study ranged from 36 (McTiernan & McDonald, 2015) to 599 participants (Kobayashi et al., 2020). All of the studies used a cross-sectional design, with participants having been recruited for the study via a convenience sampling method. The inclusion criteria were not described for all studies, and when it was, it was often broad, and generally included qualified mental health nurses/nursing staff with one year's experience. Most of the studies used correlational analyses to analyse the data.

Although McTiernan and McDonald's (2015) study was exploring hospital and community nurses, it was included as it provided a more detailed analysis of stress within the workplace, primarily exploring areas such as workload, client-related difficulties, organisational structures/process, relationships and conflicts with other professionals, lack of

resources, professional self-doubt and homework-conflict. The nurses within the study also varied in their job role (i.e. managers and specialists) and experience, and the wards included both acute and long-term wards. The participants therefore came from a range of different environments, which could provide more generalisable findings.

Quality Appraisal

Each article was assessed for its quality using a quality appraisal tool. For 11 of these, the Quality Appraisal Checklist from the National Institute of Clinical Excellence (NICE, 2012) was used (see Appendix B and C), as the studies reported within them conducted correlational analyses. The Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies recommended by the National Heart, Lung, and Blood Institute (NHLBI) (2013) was used for the one remaining article (McTiernan & McDonald, 2015) instead. This tool was chosen as the study used a between-groups cross-sectional design (see Appendix D).

Table 4

Overview of Quality Assessment Using NICE (2012) Tool

Study identification:	Levert et al. (2000)	Jenkins & Elliott (2004)	Hamaideh (2011)	Madathil et al. (2014)	Itzhaki et al. (2018)	Yang et al. (2018)	Berry & Robertson (2019)	Kim & Kweon (2020)	Payne et al. (2020)	Kobayashi et al. (2020)	Alqahtani & Al-Otaibi (2020)
Study design: Refer to the glossary of study designs and the algorithm for classifying experimental and observational study designs to best describe the paper's underpinning study design	Cross-sectional correlational design.	Cross-sectional correlational design. Convenience sample.	Descriptive correlational cross-sectional design.	Cross-sectional correlational design.	Descriptive cross-sectional correlational study. Convenience sample.	Cross-sectional correlational study.	Cross-sectional correlational design. Convenience sample.	Descriptive cross-sectional correlational design. Convenience sample.	Cross-sectional correlational design. Convenience sample.	Cross-sectional design.	Cross-sectional design. Random sampling.
Section 1: Population											
1.1 Is the source population or source area well described?	- Basic information provided about hospitals,	+ Identified that qualified nurses and nursing	+ Some background information provided regarding	- No information provided about type of healthcare	++ Country included, as well as types of wards within	+ Some information provided about hospital,	- No information provided about type of hospital	- Identified that three hospitals were used; however no	+ Some information provided about hospital	- Identified that convenience sample used so	- Basic information provided about hospital

Was the country (e.g. developed or non-developed, type of health care system), setting (primary schools, community centres etc), location (urban, rural), population demographics etc adequately described?	including type of hospital. No further information.	assistants used. Identified basic information about where worked (11 acute mental health wards at 4 hospitals) and general area of country. No other information provided.	mental healthcare in Jordan. Limited information provided.	within country or hospital information. Demographics of patients within study included only, including age, employment length, salary, and places of employment.	hospital. Demographics of participants included, including personal and work details, and the numbers and % each demographic represents.	including types of patients that it treats. No further information. Demographics information includes types of wards.	used (other than NHS medium secure forensic hospital). Only age, length of time working at unit, gender, and pay band included.	other information provided.	used, and basic information about where it is. No further information provided.	particularly hospitals were used. No other information provided.	used. No further information provided.
1.2 Is the eligible population or area representative of the source population or area? Was the recruitment of individuals, clusters or areas well defined (e.g. advertisement, birth register)?	- Convenience sample used; therefore, eligible population may not be representative of source population. Identification of hospitals used not explained. Recruitment not included.	- Convenience sample used, so may not reflect source population. Identification of hospitals used not explained.	++ Eligible population consisted of source population.	- Convenience sample used, so sample may not represent source population. Identification of hospital not explained.	- Convenience sample used; therefore, eligible population may not be representative of source population. Identification of hospital used not explained.	- Convenience sample used; therefore, eligible population may not be representative of source population. Identification of hospital used not explained.	- Convenience sample used; therefore, eligible population may not be representative of source population. Identification of hospital used not explained.	- Convenience sample used, so many not represent source population.	- Convenience sample used, so may not represent source population.	- Convenience sample used, so may not represent source population.	+ Recruitment described; however eligible population not described. Random sampling used. Identification of hospital not explained.

Was the eligible population representative of the source? Were important groups underrepresented?											
1.3 Do the selected participants or areas represent the eligible population or area? Was the method of selection of participants from the eligible population well described? What % of selected individuals or clusters agreed to participate? Were there any sources of bias?	- Participation was voluntary with a 27% response rate. Therefore, only around a quarter of the source population was represented and barriers to participation that may be relevant to the study's results were not included. Process of recruitment not included. Inclusion	- Participation was voluntary with a 39% response rate. Therefore, less than half of the source population was represented and barriers to participation that may be relevant to the study's results were not included. Inclusion/exclusion not included.	++ Response rate 82.3%; therefore, majority of eligible population. Inclusion criteria included and appeared broad, consisting of all Jordanian psychiatric nurses.	- Participation was voluntary; unclear what the response rate was. Inclusion/exclusion criteria not included.	- Recruitment was not fully explained. Participation was voluntary with a 50% response rate. Therefore, only half of the source population was represented and barriers to participation that may be relevant to the study's results were not included. Inclusion/ex	+ Recruitment was not fully explained. Participation was voluntary with an 84.5% response rate. Possible barriers to participation that may be relevant to the study's results may not have been included. Inclusion/exclusion not included.	++ Participation was voluntary with an 87.42% response rate. Therefore, over three quarters of the source population was represented. Process of recruitment not included. Inclusion criteria included and identified to reduce confounding variables.	'++ Participation was voluntary with a 90% response rate, providing high response rate. Inclusion/exclusion included and explicit. Criteria was purposefully set to exclude those with minimal experience, as nursing experience was identified as	+ Participation was voluntary with a 60% response rate. Barriers to participation that may be relevant to the study's results were not included. Inclusion/exclusion not included, although highlighted that staff on contracts or students were not included.	++ Participation was voluntary with a 92.2% response rate. Inclusion/exclusion included.	++ Inclusion criteria included. Recruitment well described; random sampling used. Demographics of patients included. Unclear how they compare to eligible population.

Were the inclusion or exclusion criteria explicit and appropriate?	and exclusion criteria not included.				clusion not included.			an important criterion.			
Section 2: Method of selection of exposure (or comparison) group											
2.1 Selection of exposure (and comparison) group. How was selection bias minimised? How was selection bias minimised?	+ Convenience sample used so may be some bias regarding groups. Biographic variables measured for staff from the three hospitals used and no differences were found.	- Convenience sample used so other confounding variables may have caused bias. Job title was only variable analysed against stressors.	- Convenience sample used so other confounding variables may have caused bias.	- Convenience sample used so other confounding variables may have caused bias. Demographics were not compared against variables.	- Convenience sample used so other confounding variables may have caused bias.	- Convenience sample used so other confounding variables may have caused bias.	+ Convenience sample used so may be some bias regarding groups. Inclusion criteria amended to reduce possible confounding variables. Demographics were compared against three variables to review for possible variations.	- Convenience sample used so other confounding variables may have caused bias. No characteristic information was compared to job stress to review whether any characteristics were related.	- Convenience sample used so other confounding variables may have caused bias. Gender, job title, and ward category were only variables analysed against job satisfaction.	- Convenience sample used so other confounding variables may have caused bias.	+ Cross-sectional design with random sampling used to minimise bias. All demographics compared to burnout to reduce bias.
2.2 Was the selection of explanatory variables	++ Research and models used to highlight	++ Selection of explanatory variables	+ Generally sound theoretical	++ Research (including literature	+ Provides research supporting	+ Research used to support need	++ Research and models used to highlight	- Although appropriate reasoning	+ Research highlights prevalence	++ Research and organisation	+ Research used to highlight variation

based on a sound theoretical basis? How sound was the theoretical basis for selecting the explanatory variables?	importance of researching variables within healthcare.	based upon theoretical models (social support 'buffering'; stressors 'stress and coping paradigm') and supporting research. Importance of research into variables also highlighted by government.	basis to explain relationship between variables and need to explore burnout. More research could have been used to support some statements used however.	review), as well as government findings used to highlight need to review burnout, as well as whether the variables chosen contributes towards it within US nurses.	workplace violence and job stress as significant contributors towards burnout, however, does not discuss this relationship further (e.g. reasons why, why these variables are more significant than other variables).	to research workplace violence in nursing. Less Research used to describe importance of burnout and coping skills in relation to workplace violence.	importance of researching burnout within healthcare. Research provided to identify possible link and need for more research into relationship between variables within environment used.	for identification of variables, including highlighting nationally identified problem of stressors, not all information is supported with research.	of job satisfaction and burnout in other jobs, and difficulties faced by nurses in South Africa within their job roles. Does not appear to discuss need to research job satisfaction with burnout in more detail.	al reports used to highlight workplace violence impact on nurses in Asian countries, including burnout.	regarding demographics contributing towards burnout.
2.3 Was the contamination acceptably low? Did any in the comparison group receive the exposure? If so, was it sufficient to cause important bias?	+ Work environment was analysed separately for each subscale reducing contamination. Convenience sample used so may be some contamination.	+ Multiple subscales of stressors compared separately to burnout. Cross-sectional design used so may be some contamination, although unclear.	+ Possible contamination regarding social support, as need for support not measured.	+ Cross-sectional design used so may be some contamination. Does not report on this within report.	+ Cross-sectional design used so possible contamination. Possible contamination with workplace violence, but unclear. Possible that patients have had different experiences of workplace violence that contributes towards burnout that questionnair	+ Cross-sectional design used so possible contamination. Possible contamination with workplace violence, but unclear. Possible that patients have had different experiences of workplace violence that contributes towards burnout that questionnair	+ Total score used for clinical supervision score, however climate broken into subscales. Convenience sample used so may be some contamination, although unclear.	+ Total score used for job stress. Unclear whether there is any contamination, and not referred to within paper.	+ Total score used for job satisfaction; non-validated measure used. Possible contamination may have occurred between groups; no information regarding this or managing this within paper.	- Cross-sectional design used so possible contamination. Possible contamination with workplace violence, but unclear. Reliability of scale has not been included. Possible that patients have had different experiences of workplace violence that	+ Cross-sectional design used so some possible contamination. burnout separated into subscales, possibly reducing contamination.

					e does not capture.	e does not capture.				contributes towards burnout that questionnaire does not capture.	
2.4 How well were likely confounding factors identified and controlled? Were there likely to be other confounding factors not considered or appropriately adjusted for?	+ Patients from different hospitals were compared to identify whether there were any differences in biological variables. No other confounding factors were identified or	+ As appraisal of stressors was included, this could account for individual and environmental confounding variables that could influence stressor scores. Social	+ Wide demographics collected and used within part of analysis. Possible confounding variables not identified or adjusted for within method or analysis. Perceived social support	+ Variations between New York and Montana patients were controlled for within the analysis; however no other confounding variables were identified or adjusted for within the	+ Identified confounding variables including memory (retrospective information was used for violence), and caseload that were not adjusted for. Some potential patients were unable	- Confounding variables not identified, discussed, or adjusted for within study.	+ Inclusion criteria identified to reduce possible confounding variables. Possible variation in climate amongst different wards has not been discussed or adjusted for. Scale used	+ Possible confounding variables have been identified with examples given (age, clinical career, psychiatric career, violence experienced) and accounted for within	- Possible confounding variables not identified, discussed, or appropriately adjusted for.	- Confounding variables not identified or controlled for. Possible that a particular aspect of workplace violence affected burnout.	- Confounding variables not identified or controlled for Random sampling was used which could have minimised some participation bias.

Was this sufficient to cause important bias?	controlled for.	support was analysed as a potential moderator to stress and burnout; however more information not included e.g. frequency of support, appraisal of support.	analysed as total score, however possible variations within need for support and type of support not measured. Despite this, scale had good reliability.	study. Some items were removed from depressive symptoms scale, which may have affected data.	to complete the questionnaire which may have influenced results (including being too busy, not wanting to share honest information, and being disrupted). The organisation's management of violence and how they supported staff was also not included in the study, so unclear if this was consistent for all staff.		for climate questionable validity, so could be influenced by possible confounding variables resulting in a bias. Minimal information regarding whether there were variations in way clinical supervision was ran between patients that could have influenced results (inclusion criteria did include patients having supervision a minimum of six times).	analysis. Other possible confounding variables were identified, but not collected or analysed.			
2.5 Is the setting applicable to the UK? Did the setting differ significantly from the UK?	- Study in South Africa, where mental health practices, resources and attitudes may differ	++ Completed in England.	- Study completed in Jordan where resources, mental health practices, and attitudes may vary.	+ Study completed in New York and Canada. Some attitudes, resources and mental health	- Study in Israel, where mental health practices, resources and attitudes may differ	- Study in China, where mental health practices, resources and attitudes may differ	++ Completed in England.	- Study completed in South Korea, where resources, mental health practices,	- Study completed in South Africa where resources, mental health practices, and attitudes may vary.	- Study completed in Japan where resources, mental health practices, and attitudes may vary.	- Study completed in Saudi Arabia where resources, mental health practices,

				practices may vary.				and attitudes may vary.			and attitudes may vary.
Section 3: Outcomes											
3.1 Were the outcome measures and procedures reliable? Were outcome measures subjective or objective? How reliable were outcome measures (e.g. inter- or intra-rater reliability scores)? Was there any indication that measures had been validated (e.g. validated against a gold standard measure or assessed for content validity)?	+ Reliability not given for burnout scale. Acceptable levels of reliability and validity reported for each component by literature. Reliability not provided for Workload and Lack of Collegial Support scale. Acceptable reliability and validity reported in literature for role conflict and role ambiguity scale, but not provided. Adequate reliability reported for orientation to life	+ Cronbach's alpha varied for stressors subscales (0.66-0.92) but predominantly good. Cronbach's alpha good for depersonalisation (0.75) and personal accomplishment (0.76), and excellent for emotional exhaustion (0.9) for burnout. Cronbach's alpha for social support good (0.84).	++ Cronbach's alpha for burnout scale good (0.84) with subscales ranging from good to excellent (emotional exhaustion 0.91, depersonalisation 0.84, personal accomplishment 0.88). Cronbach's alpha for social support scale good (0.85). Cronbach's alpha for job satisfaction scale good (0.76).	+ Cronbach's alpha for burnout scale varied from excellent to questionable (emotional exhaustion 0.919; depersonalisation 0.609; personal accomplishment 0.742). Test-retest for depersonalisation by other researchers ranged from low to moderately high. Cronbach's alpha for transformational leadership scale excellent 0.96. Cronbach's alpha for	+ Self-reported questionnaires used. Cronbach's alpha for workplace violence good (0.87) although data collected retrospectively (last 12 months) so may be bias. Reliability not included for job stress. Cronbach's alpha for burnout questionable (0.62). Validity of outcome measures not included.	++ Workplace violence scale was devised for study following comprehensive literature review and focus group interview of nurses. Expert panel used to discuss content validity. Test-retest intraclass correlation ranged 0.870 to 0.988 for subscales. Cronbach's alpha ranged acceptable to excellent to subscales (0.791-0.943). Cronbach's alpha for burnout scale ranged in previous	+ Burnout scale consistently validated over past 20 years; Cronbach's alpha acceptable to excellent (0.62-0.9). Supervision scale internally valid and excellent reliability, Cronbach's alpha 0.92. Climate scale validated within forensic settings; Cronbach's alpha poor to good (Therapeutic Hold 0.53, Experienced Safety 0.75, Patient Cohesion 0.84).	++ Cronbach's alpha for job stress scale excellent (0.95). Cronbach's alpha excellent for psychological capital (0.95). Cronbach's alpha for burnout excellent (0.95). No mention of validation for any scales.	- Validated measure used for burnout, however reliability not included within the study. Measure used for job satisfaction not validated locally or internationally, and reliability therefore not included.	+ Cronbach's alpha for wellbeing scale good (0.89). Cronbach's alpha for psychological distress scale good (0.88). Cronbach's alpha for alcohol use disorder acceptable (0.79). Cronbach's alpha for anger related to harmful experience good (0.80). Not validated. Cronbach's alpha for burnout scale acceptable (0.78). This scale was validated. No reliability	+ Cronbach's alpha for burnout scale good (0.80), with subscales ranging from acceptable to good (0.79-0.81).

	questionnaire, but not given in study.			autonomy scale acceptable (0.787). Cronbach's alpha for depressive symptoms scale excellent (0.903).		studies 0.82-0.86. Good validity.				provided for workplace violence scale. Not validated.	
3.2 Were the outcome measurements complete? Were all or most of the study participants who met the defined study outcome definitions likely to have been identified?	+ Acceptable reliability for scales used. Unclear regarding missing data. Subscales analysed separately.	+ Does not include information regarding this, so unclear.	+ Unclear whether there was missing data or not or whether all scores were included within data. Subscales analysed independently. Scales had good reliability.	- Variable reliability on scales. Items removed from depressive symptoms scales, which may have excluded some data from individuals within this category.	- Some demographics information missing (wards working on, years employed in department, and participation in violence workshop 11.4-15.7%). Other missing demographic information minimal (1.8-6.1%). Burnout measure had questionable reliability, so measures of burnout may be	++ Each variable reviewed for missing data separately, however missing data may have meant that some patients may not have been included when they should have been. High reliability on scales.	- Poor reliability for therapeutic hold climate, so may not include all patients. Data underwent Winsorizing to improve skew of data, resulting in removal of all significant outliers. Therefore, these patients' scores may not be fully accurately recorded.	+ 10% of subjects were excluded due to missing data, therefore this may affect true results. Scales used had high reliability.	- Unclear, although unvalidated measure used for job satisfaction. Little information also provided regarding analysis.	+ Good reliability on scales. Some data missing, so some relevant information may not have been included.	++ Good reliability for burnout scale. Demographic information included multiple options.

					questionable in some patients.						
3.3 Were all the important outcomes assessed? Were all the important benefits and harms assessed? Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison?	++ All subscales analysed separately against burnout. Possible confounding variables not discussed, therefore could have been other variables that could have influenced results that should have been assessed.	+ Appraisal of stress was included when reviewing stress to account for different responses to stress. When analysing social support as a mediator for stress on burnout, only total stress and total support were reviewed, despite both outcomes' subscales having variable effects on burnout.	+ All subscales independently analysed together. Total score analysed for job satisfaction and support. Wide demographic information collected, but not all analysed against burnout.	+ Demographics were not assessed within analysis. Causal inferences were not assessed between transformational leadership and burnout, so unsure which variable affects which.	- For workplace violence, the outcome identified was frequency of incidents, however severity or response to violence was not measured. Work stress was measured over the last month via one question, which may not be sufficient to encapsulate stress for all participants in this study.	++ Workplace violence reviewed re incident type, and all variables were analysed together, including demographics. Workplace violence scale included factors that may influence workplace violence, which could be relevant when research responses to workplace violence.	- Perceived effectiveness of supervision was assessed, however no further information about supervision that may influence this was collected (e.g. frequency of supervision). Possible variations in climate in different wards not collected.	- Demographics collected, and although used to control for confounding variables, were not analysed against variables separately. Some other possible confounding variables were identified but not assessed.	- Demographics collected identified variabilities within gender, rank, and ward, however these were not analysed regarding burnout or job satisfaction.	+ All variables analysed together, including demographics in regards to workplace violence. Some descriptive information re workplace violence experiences.	+ All demographic information compared to burnout. Burnout not separated in subscales, but total burnout separated into mild, moderate, severe, and very severe. May be some variations within subscales.

3.4 Was there a similar follow-up time in exposure and comparison groups? If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison. Analyses can be adjusted to allow for differences in length of follow-up (e.g. using person-years).	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used so no follow-up.
3.5 Was follow-up time meaningful? Was follow-up long enough to assess long-	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used, so no follow-up.	Cross-sectional design used so no follow-up.

term benefits and harms?											
Was it too long, e.g. participants lost to follow-up?											
Section 4: Analyses											
4.1 Was the study sufficiently powered to detect an intervention effect (if one exists)? A power of 0.8 (i.e. it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard. Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate?	- Pearson's coefficient included as effect size for each analysis described. Power calculation not included and does not discuss expected effect size or required sample size.	- Pearson's coefficient included as effect size for each analysis described. Power calculation not included and does not discuss expected effect size or required sample size.	- Pearson's coefficient included as effect size for each analysis described. Power calculation not included and does not discuss expected effect size or required sample size.	+ Power analysis completed; 92 patients needed for 0.85 power for correlation coefficients, and 80 patients needed for 0.86 power for regression analysis. Sample size of 92 used; however, three were removed due to missing data (n = 89).	- Pearson's coefficient included as effect size for each analysis described. Power calculation not included and does not discuss expected effect size or required sample size.	- Pearson's coefficient included as effect size for each analysis described. Power calculation not included and does not discuss expected effect size or required sample size.	- Pearson's coefficient included as effect size for each analysis described. Power calculation not included and does not discuss expected effect size or required sample size.	++ Bootstrapping used with 95% CI calculated with 5000 bootstrap resamples for psychological capital as mediator. Analysis showed indirect effect of 0.2417, accounting for 58.8% of total effect. This value was statistically significant as did not include zero between lower limit (0.1442) and upper limit (0.3548) of CI.	- Pearson's coefficient included as effect size for each analysis described. Power calculation not included and does not discuss expected effect size or required sample size.	- Power not included or calculated. Expected effect size not included. Whether sample size was adequate not included.	+ Highlights that sample size was calculated using results from a previous study; however, this is not included within this study.

4.2 Were multiple explanatory variables considered in the analyses? Were there sufficient explanatory variables considered in the analysis?	+ All variables and subscales were compared against burnout in analysis. Some biographical variables were collected to adjust for differences within patients, however this was not reviewed against burnout.	+ When comparing outcomes against burnout, all subscales used and separately compared. When reviewing support as mediator, only total was reviewed rather than separate subscales.	+ All outcomes were analysed when reviewing predictors for burnout, but not all were analysed when correlations with burnout.	+ Demographic information not compared. Other variables were analysed together.	+ All subscales of each outcome were analysed against each subscale. Some demographic information not included.	+ Workplace violence was separated into verbal, physical and sexual harassment. Demographics only compared to workplace violence and not burnout or coping skills.	++ All variables and subscales were compared against burnout in analysis.	+ Not all variables collected used fully within analysis. Some confounding variables accounted for within analysis.	- Total job satisfaction compared to total burnout (no compared to burnout subscales due to small sample size). Ward category not compared to burnout, despite being collected.	++ When comparing outcomes to workplace violence, all relevant variables used, including demographics. Demographics for those with and without workplace violence were compared.	+ All demographics included within analysis. Burnout scale not separated into subscales.
4.3 Were the analytical methods appropriate ?	+ Analyses were used dependent upon type of data collected. No other amendments made.	+ Relevant analyses were used dependent upon type of data collected. No other amendments made.	+ Relevant analyses were used dependent upon type of data collected. No other amendments made.	++ Appropriate amendments were made to analysis to improve results, including to improve power, adjust for differences amongst patients, and review significance.	+ Analyses were used dependent upon type of data collected. No other amendments made.	+ Analyses were used dependent upon type of data collected. No other amendments made.	++ Analyses used based on data collected. Winsorizing used on data to improve skew, and multicollinearity was examined with all variables being at acceptable levels.	++ Analysis controlled for some confounding variables and chosen for higher statistical power and more accurate Type I error rates.	+ Analyses adjusted for small sample size. No other amendments made.	+ Analysis adjusted for missing data. No other amendments made.	+ Relevant analyses were used dependent upon type of data collected. No other amendments made.

Were important differences in follow-up time and likely confounders adjusted for?											
4.6 Was the precision of association given or calculable? Is association meaningful?	+ P values included for each analysis, but CI not included.	+ CI not included. P values included for each analysis.	- CI not included. Calculated p values not included but did include whether significant or not when significance set at 0.05 and 0.01.	++ CIs included and used to determine whether statistically significant or not. P values included for each analysis.	+ CI not included. P values included for each analysis.	+ CI not included. P values included for each analysis.	+ P values included for each analysis, but CI not included.	+ CIs included. Analysis for psychological capital as mediator fell within CIs identified so statistically significant. P values not provided for correlational data, but ranges are given.	- Neither CI nor P values were included.	++ CI ranges included at 95%. P values also given.	+ CI ranges included at 95%. P values not included.
Were confidence intervals or p values for effect estimates given or possible to calculate?											
Were CIs wide or were they sufficiently precise to aid decision-making? If precision is lacking, is this because the study is under-powered?											
Section 5: Summary											

5.1 Are the study results internally valid (i.e. unbiased)? How well did the study minimise sources of bias (i.e. adjusting for potential confounders)? Were there significant flaws in the study design?	- Variable reliability regarding scales used. Some confounding variables accounted and adjusted for. Some confounding variables not accounted or adjusted for. Self-reporting data, which may have influenced data.	+ Various stressors included, as well as sources of support. Due to small sample size, total support was analysed as mediator despite variations within subscales. As study self-report, this could have influenced data collected.	+ Reliable scales used. Study used self-reported data, so could be some biases within results. Confoundin g variables not identified or adjusted for within method and analysis.	+ Mostly reliable scales used. Study used self-reported data, so could be some biases within results. Items resulted from depressive symptoms scale which may have affected data. Not all confounding variables identified or adjusted for.	- Small sample size used with self-reporting information, which may influence data. Possible confounding variables not discussed or accounted for.	- Small sample size used with self-reporting information, which may influence data. Possible confounding variables not discussed or accounted for.	+ Variable reliability regarding scales used. Some confounding variables accounted and adjusted for. Some confounding variables not accounted or adjusted for.	+ Some confounding variables not accounted for. High reliability on scales used. Study was self-reported, so this could have influenced data.	- No information provided regarding accounting for confounding variables. Small sample size used. As study self-reported, this could have influenced data.	- No information provided regarding accounting for confounding variables. As study self-reported, this could have influenced data. Relatively good reliability re scales.	+ Some confounding variables re patients was checked for, but no other confounding variables accounted for. Sample size was appropriate. Good reliability for scales.
5.2 Are the findings generalisable to the source population (i.e. externally valid)? Are there sufficient details given about the study to determine if the findings are generalisable to the	- A small convenience sample was used with a cross-sectional design, so data may not be representative of source population.	- A small convenience sample was used with a cross-sectional design, so the hospitals used may not be representative of other hospitals in the UK. In addition to this, the patients self-selected	+ Wide demographics provided for patients. Source population used as eligible population with 82.3% response rate. May still be some biases within data due to patients volunteering	- A small convenience sample was used with a cross-sectional design, so data may not be representative of source population. State hospital used so findings may not relate to other	- A small convenience sample was used with a cross-sectional design, so the findings may lack external validity. In addition to this, the patients self-selected themselves for the study and there	- A small convenience sample was used with a cross-sectional design, so the findings may lack external validity. In addition to this, the patients self-selected themselves for the study and there	- A small convenience sample was used with a cross-sectional design, so data may not be representative of source population.	+ A small convenience sample was used with a cross-sectional design, so findings may lack external validity. In addition to this, the patients self-selected themselves for the study, so there may be	- A small convenience sample was used with a cross-sectional design, so findings may lack external validity. In addition to this, the patients self-selected themselves for the study and there was a low	+ A cross-sectional design was used, so findings may lack external validity. In addition to this, the patients self-selected themselves for the study, so there may be biases within the patients used which	- A cross-sectional design was used. May be some biases in data as data self-reported.

source population? Consider: participants, interventions and comparisons, outcomes, resource and policy implications.		themselves for the study and there was a low response rate, so there may be biases within the patients used that are not reflective of the source population.	to participate.	hospital settings.	was a low response rate, so there may be biases within the patients used that are not reflective of the source population.	was a low response rate, so there may be biases within the patients used that are not reflective of the source population.		biases within the patients used that are not reflective of the source population.	response rate, so there may be biases within the patients used that are not reflective of the source population.	may cause bias. A large sample was used.	

Table 5

Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies Tool Using the NHLBI (2013) Tool

Study Identification:	McTiernan & McDonald (2015)
1. Was the research question or objective in this paper clearly stated?	Y - Aims included.
2. Was the study population clearly specified and defined?	N - some demographics of patients included, however source population not included. Hospital details not included.
3. Was the participation rate of eligible persons at least 50%?	NR - response rate not included.
4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?	Y - convenience sample from one hospital. Inclusion criteria basic but included for all patients. Could be variations re wards within hospital however.
5. Was a sample size justification, power description, or variance and effect estimates provided?	N - power, required sample size and effect size not included.
6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?	N - cross-sectional design used.
7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?	N - cross-sectional design used.
8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g. categories of exposure, or exposure measured as continuous variable)?	Y - Burnout measured as continuous variable.
9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	CD - reliability of burnout good to excellent; however, validity not included. Measure completed within own time voluntarily by patient, so unclear if implemented consistently.
10. Was the exposure(s) assessed more than once over time?	N - no follow-up period.
11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	CD - reliability of DV scales excellent; however, validity not included. Measure completed within own time voluntarily by patient, so unclear if implemented consistently.
12. Were the outcome assessors blinded to the exposure status of participants?	Y - measures completed voluntarily by patients within own time with assessors not knowing who would complete it and who wouldn't.
13. Was loss to follow-up after baseline 20% or less?	NA - no follow-up.

14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?	N - Possible confounding factors identified but not controlled for (includes gender, honesty of answers, and other coping strategies not measured). However, a coping scale specifically designed for nurses was used to control for possible confounding variables.

Process of Analysis

In completing the analysis for this review, the first step completed was to read through each article in detail and to highlight all relevant and important information for the review by hand. This included the participants and their relevant information, the independent and dependent variables, the analysis type, the outcomes and the significance/strength of this relationship, and potential limitations. This information was recorded in a table, so that each study could be directly comparable (Table 2 and 3 facilitated this step). This helped inform how and where the papers varied, as well as whether these variations were relevant to the results.

The analytical approaches used in each study were then assessed to explore how directly comparable the results may be. The analytical approach was the main feature used, however, variations in countries and other areas was also included. Following this, the independent variables and the outcomes were compared to review how best to group the overall results. Commonalities amongst the type of independent variables as well as previous research findings and theories helped guide this. Therefore, the results were grouped by personal characteristics, organisational factors, stress, and violence. These categories were then further separated into sub-categories based on further similarities between the types of independent variables and pre-existing research (e.g. Personal characteristics – Age).

To identify the overall findings for each category, the relevant sub-categories were first reviewed. To do this, the studies within the first sub-category were compared against each other (e.g. all studies that assessed age). The quality of each paper and the strength of the relationships were incorporated to explore how consistent the findings were. When the overall findings were identified for all of a category's sub-categories, these overall findings were compared in a similar way to find the category's overall findings and to rank the sub-categories' overall findings within the category. This was then repeated for all categories. The categories were subsequently ordered based upon how strong their findings were.

This analysis was approached from a quantitative view, with a deductive approach used. The theoretical approach used was a positivist approach, whereby causal and explanatory factors help inform functional relationships (Ponterotto, 2005). This can then help inform predictions (Gergen, 2001). Therefore, there is an assumption that a single tangible reality exists that can be understood, identified and measured, and that knowledge is developed objectively and is congruent with reality (Park et al., 2020).

Results

Of the 12 articles, two were from England, with the others being from South Africa (*n* = 2), Ireland (*n* = 1), Israel (*n* = 1), Jordan (*n* = 1), Saudi Arabia (*n* = 1), China (*n* = 1), South Korea (*n* = 1), Japan (*n* = 1), and the United States (*n* = 1). Across ten of the studies, a total of 2,098 participants took part, with at least 2,873 participants having been approached for participation. 125 participants took part in the remaining two studies (Madathil et al., 2014; McTiernan & McDonald, 2015), although the total number approached was not included. For measuring burnout, four different psychometrics were used. Itzhaki et al. (2018) and Kobayashi et al. (2020) used the Professional Quality of Life Scale (Stamm, 2010), Kim and Kweon (2020) used the Burnout Scale (Pines et al., 1983), and Payne et al. (2020) used the Copenhagen Burnout Inventory (Kristensen et al., 2005). The remaining eight studies used the Maslach Burnout Inventory (Maslach & Jackson, 1981), with five studies using the Maslach Burnout Inventory (1986; 1996) versions (Alqahtani et al., 2020; Hamaideh, 2011; Jenkins & Elliott, 2004; Levert et al, 2000; McTiernan & McDonald, 2015), two using the Humans Services Survey (1981; 1996) versions (Berry & Robertson, 2019; Madathil et al, 2014), and one using the General Survey (1996) version (Yang et al, 2018). In the studies that used the Maslach Burnout Inventory, burnout was divided into three subscales – emotional exhaustion (feelings of being emotionally overextended and exhausted by one's own work), depersonalisation (unfeeling and impersonal response towards one's service, care, treatment

or instruction), and personal accomplishment (feelings of competence and successful achievement in own work). According to the inventory, high scoring on the emotional exhaustion subscale or the depersonalisation subscale indicates high levels of burnout. Conversely, low scores on personal accomplishment indicates high levels of burnout.

Due to the variations in organisational factors between the studies, and the conflicting nature of some of the results, a narrative synthesis was conducted. The studies were therefore compared and contrasted, including similarities and differences between clinical and organisational settings and outcomes. The findings yielded four major themes, which were reflective of existing research, and were broken down further.

Personal Characteristics

Gender

Four of the studies considered whether gender influenced the development of burnout. For three of these studies, no significant relationships were found between gender and burnout, indicating that burnout affected both male and female staff similarly (Itzhaki et al., 2018; Payne et al., 2020; Yang et al., 2018). Hamaideh (2011) found correlations between burnout and gender, however, the reporting of their findings appears to be variable. While they reported that the emotional exhaustion and personal accomplishment subscales correlated with gender, they only specified that females experienced higher emotional exhaustion. They did not, however, identify which gender experienced lower personal accomplishment. In contrast to these findings, this study later reports that single male nurses experienced higher emotional exhaustion and lower personal accomplishment. This appears to be referring to the specific characteristics of being both male and single, however, and taken together with the previous findings, may indicate that females experience higher emotional exhaustion overall, but single male nurses are a specific group who are at risk of experiencing high levels of burnout.

Age

With regards to age, four studies investigated how age impacts burnout. The results were mixed, as two of the studies found that burnout was higher in younger staff, with one of these studies specifically finding that younger mental health nursing staff had significantly higher emotional exhaustion and depersonalisation (Berry & Robertson, 2019), and the other finding that younger staff had lower personal accomplishment (Hamaideh, 2011). In contrast, two of the studies reported the opposite, with older staff experiencing higher levels of burnout (Alqahtani et al., 2020; Yang et al., 2018).

Berry and Robertson (2019) took this further, however, and found that clinical supervision, ward climate, and perceived threat of violence could be influencing levels of depersonalisation in older staff. They found that if older staff were receiving effective clinical supervision, were on a ward that was attuned to the therapeutic needs of the patients and felt safer from the threat of violence and aggression, this resulted in lower depersonalisation. This therefore suggests that although age could be a contributing factor in the development of burnout, it is also influenced by how the ward is managed and how well staff members are supported.

Seniority and Experience

Mixed results were found when reviewing the relationship between job rank and burnout. Two studies suggested that there was no association between job rank and burnout (Itzhaki et al., 2018; Payne et al., 2020). In contrast to this, Yang et al. (2018) found that senior mental health nurses experienced significantly higher depersonalisation than registered mental health nurses, whereas Berry and Robertson (2019) found that registered mental health nurses reported higher levels of emotional exhaustion compared to senior mental health nurses. Although it is difficult to ascertain why there are varying results regarding these studies, each study took place in a different country, with different job rankings and

requirements for each post. It is possible therefore that the differences within the characteristics of the job roles may make it more difficult to compare these findings directly.

Mixed results were also reported when reviewing the relationship between years spent as a mental health nurse and burnout. One study found no significant relationship between burnout and years of experience (Payne et al., 2020). Two studies, however, found that there was a relationship: (i) Yang et al. (2018) found that depersonalisation increased the longer participants spent within units, suggesting that more experienced staff suffered from higher levels of burnout; (ii) Hamaideh (2011), however, found that personal accomplishment was lower in mental health nurses with less experience, suggesting that less experienced staff suffered from higher levels of burnout.

Other

High emotional exhaustion and high depersonalisation were significantly related to someone's intention to leave their job (Hamideh, 2011), and home-work conflict (Jenkins & Elliott, 2004). High depersonalisation was also significantly related to a further distance between work and home (Hamaideh, 2011). Severe burnout was significantly associated with being an ex-smoker, and in Saudi Arabia, with being of Saudi nationality (compared to a non-Saudi nationality) (Alqahtani et al., 2020). The results varied in terms of relationship status, with one study reporting that being single (when compared to being married) was predictive of emotional exhaustion (Hamaideh, 2011), whereas another study found that those who were older and married experienced higher levels of burnout than those who were younger and single (Alqahtani et al., 2020).

Organisational Factors

Role

Conflict and Ambiguity. High role conflict and ambiguity were found to be related to high levels of burnout (Levert et al., 2000). Levert et al. (2000) described role conflict as occurring when mental health nurses have too many conflicting demands placed upon them by others. Role ambiguity is described as occurring when the aim of one's job or extent of their responsibilities becomes unclear. Levert et al. (2000) found that high role conflict and ambiguity can result in high emotional exhaustion and depersonalisation. High role conflict was also found to be significantly associated with low personal accomplishment.

Caseload and Autonomy. Three studies identified that caseload had a significantly positive correlation with burnout, with a higher caseload being related to higher levels of emotional exhaustion (Jenkins & Elliott, 2004; Levert et al., 2000), depersonalisation (Levert et al., 2000), and lower levels of personal accomplishment (Hamaideh, 2011). Levert et al. (2000) also found that when caseload was combined with sense of coherence (see subsection 'stress' for a full explanation of this concept), this accounted for the majority of variance within emotional exhaustion as well as depersonalisation. Interestingly, Hamaideh (2011) found that mental health nurses with a lower caseload were more emotionally exhausted, however, their overall conclusions were that mental health nurses with the highest caseloads are more likely to experience burnout, which is supported by Jenkins and Elliott (2004) and Levert et al. (2000).

With regards to job autonomy, Madathil et al. (2014) found that emotional exhaustion and depersonalisation were significantly and negatively related to autonomy scores, with emotional exhaustion and depersonalisation increasing when autonomy was lower. In addition to this, autonomy was also significantly associated with personal accomplishment, with levels of personal accomplishment being lower as autonomy decreased.

Organisation

Structures and Processes. Jenkins and Elliott (2004) explored whether feeling stressed due to the organisational structure and processes was related to burnout. Organisational structure and processes were measured using the Mental Health Professionals Stress Scale (MHPSS) (Cushway et al., 1996). This included lack of support from management, relationship with line manager, communication and flow of information at work, poor management and supervision, the way that the organisation resolves conflict, and organisational structure and policies. Jenkins and Elliott (2004) asked participants to rate how difficult they found these areas to cope with, and found that high stress due to these factors was significantly related to high emotional exhaustion.

Support. In exploring the relationship between support and burnout, three levels of support were measured by the studies: collegial, social (includes professional and personal support), and clinical supervision. In addition to this, transformational leadership was also reviewed. The results for collegial support and social support were the same, with low collegial support and low social support resulting in high levels of burnout. Two studies found that low collegial support was associated with high levels of emotional exhaustion (Jenkins & Elliott, 2004; Levert et al., 2000), and depersonalisation (Levert et al., 2000). In addition to this, conflicts with professionals were also significantly related to emotional exhaustion and depersonalisation, with burnout increasing as conflicts increased (Jenkins & Elliott, 2004). With social support, those accessing less support experienced higher emotional exhaustion (Hamaideh, 2011; Jenkins & Elliott, 2004) and depersonalisation, and lower personal accomplishment (Hamaideh, 2011).

Berry and Robertson (2019) reviewed the impact that clinical supervision had on burnout. They found that those who perceived clinical supervision to be effective had significantly lower depersonalisation. Despite this, however, they found that the ward climate

was more relevant to levels of burnout than clinical supervision (see subsection 'ward' for a more in-depth discussion of this aspect).

Madathil et al. (2014) explored transformational leadership, which is described as a rewarding, optimistic, and forward-looking leadership style (Kanste et al., 2007). They found that high transformational leadership scores were associated with lower rates of burnout, specifically lower emotional exhaustion, and higher personal accomplishment.

The impact of mental health workshops was also reviewed. Personal accomplishment was found to correlate positively with participation in mental health workshops, with those who participated experiencing higher personal accomplishment than those who had not, and therefore lower burnout (Hamaideh, 2011). Unfortunately, the content of the workshops was not included within the study.

Ward. Two studies investigated whether type of ward influenced burnout. Itzhaki et al. (2018), who recruited participants from acute illness, rehabilitation, long-term, forensic, psycho-geriatric, and emergency wards (open and closed) in Israel, found that type of ward was not associated with burnout. Hamaideh (2011), however, who recruited participants from acute and chronic wards from the Ministry of Health (public healthcare service), Royal Medical Services (military), and private sector in Jordan, found that participants from acute wards experienced significantly higher emotional exhaustion than those on chronic wards, despite a higher caseload being on the chronic units. This difference in scoring could be attributed to the two studies having taken place in different countries, which would have differing healthcare systems, and individual attitudes and cultures.

Berry and Robertson (2019) investigated the relationship between ward climate and burnout, with ward climate being divided into 'therapeutic hold' (the extent to which the environment is perceived as supportive of patients' therapeutic needs), 'patient cohesion' (the extent of mutual support between patients), and 'experienced safety' (the perceived amount

of threat from violence and aggression). For this study, all aspects of ward climate were significantly associated with emotional exhaustion and depersonalisation, with burnout increasing when ward climate was perceived to be low. 'Therapeutic hold' was also significantly associated with personal accomplishment, with personal accomplishment being high when 'therapeutic hold' was high. They also found that specifically mental health nursing staff who felt more threatened from violence and aggression, and perceived patients as less supportive of each other, were more likely to experience emotional exhaustion, particularly younger mental health nursing staff.

Violence

Workplace Violence

Three studies explored the relationship between workplace violence and burnout. All of these studies found that burnout was significantly associated with frequency of physical and verbal violence, with higher levels of violence resulting in higher emotional exhaustion, depersonalisation (Hamaideh, 2011; Yang et al., 2018), and overall levels of burnout (Kobayashi et al., 2020). In addition to this, Itzhaki et al. (2018) found that there was no direct or mediated association between violence exposure and burnout, but that physical and verbal violence was associated with work stress, which in turn was associated with burnout. Berry and Robertson (2019) also found that mental health nursing staff who felt more threatened from violence and aggression, and perceived patients as less supportive of each other, were also more likely to experience higher emotional exhaustion. Itzhaki et al. (2018) explored the effect that violence workshops had on burnout, and found that there was no significant association between burnout and participation in a violence workshop. The content of the workshop was not included within the study, so it is difficult to ascertain what this finding may specifically be due to.

Sexual Harassment from Patients

Only one study reviewed sexual harassment from patients (including 'verbal sexual harassment' and 'sexual harassment with bodily touch') and burnout, and found that sexual harassment significantly correlated with emotional exhaustion and depersonalisation, with high rates of harassment being associated with higher levels of burnout (Yang et al., 2018).

Client-Related Difficulties

Jenkins and Elliott (2004) explored the relationship between client-related difficulties and burnout. For client-related difficulties, the authors used the Mental Health Professionals Stress Scale (MHPSS), which described client-related difficulties as problems related to 'terminating with patients', 'dealing with death or suffering', 'no change or slowness of change in patients', 'managing therapeutic relationships', 'physically threatening patients', and 'difficult and/or demanding patients'. The study found that when mental health nurses experienced more difficulties related to their patients, they experienced significantly higher emotional exhaustion and depersonalisation.

Stress

Three studies investigated the relationship between burnout and stress. For two of these studies, stress is referring to general perceived levels of stress with no reference to whether this is short- or long-term (Hamaideh, 2011; Jenkins & Elliott, 2004). The third study, however, uses the term 'job stress' to refer to excessive stress that cannot be effectively managed within the environment or by the individual's resources (Kim & Kweon, 2020). All three studies found that high levels of stress were associated with higher levels of overall burnout (Kim & Kweon, 2020), higher emotional exhaustion and depersonalisation, and lower personal accomplishment (Hamaideh, 2011; Jenkins & Elliott, 2004). In addition to this, Hamaideh (2011) found that stress predicted all areas of burnout, and Kim and Kweon (2020) found that job stress had a significant effect on burnout, particularly when experienced

over a long period of time. The authors also found that the relationship between job stress and burnout could be mediated by psychological capital. They describe this as a composite concept of self-efficacy, hope, optimism, and resilience, which indicates the degree of positive cognitive status of an individual. Staff who are experiencing high levels of job stress are therefore less likely to experience burnout if their psychological capital was high.

Itzhaki et al. (2018) found that burnout was negatively correlated with compassion satisfaction, but positively correlated with secondary traumatic stress. This suggests that when experiencing high levels of burnout, participants can experience low levels of positive feelings when helping others, and high levels of secondary traumatic stress due to working with individuals who have experienced trauma. Itzhaki et al. (2018) also found that mental health nurses who perceived their work as more stressful experienced higher levels of burnout.

Two studies explored job satisfaction and burnout, and found that low job satisfaction was correlated with high levels of burnout (Payne et al., 2020), including high depersonalisation and emotional exhaustion, and low personal accomplishment (Hamaideh, 2011). One study explored professional self-doubt as a source of stress, and found that this was significantly related to burnout, with emotional exhaustion and depersonalisation increasing as professional self-doubt increased (Jenkins & Elliott, 2004).

Levert et al. (2000) investigated the relationship between sense of coherence and burnout, and described a sense of coherence as the ability to use effective coping strategies in order to manage stress. They found that sense of coherence was significantly associated with emotional exhaustion and depersonalisation, with the majority of their participants having a low sense of coherence and high levels of emotional exhaustion and depersonalisation. In addition to this, when low sense of coherence was combined with a high workload, this explained the majority of the variance in emotional exhaustion and depersonalisation scores.

Levels of Burnout

Of the studies being reviewed, nine reported mixed results around levels of burnout within their studies. Part of this is related to the burnout measure used, with two studies having varying levels of burnout depending upon the sub-category of burnout (Hamaideh, 2011; Jenkins & Elliott, 2004). Two studies found that their participants had low levels of burnout. Yang et al. (2018) identified overall burnout was predominantly rated as mild, and Jenkins and Elliott (2004) found that depersonalisation was predominantly low, and personal accomplishment high, with 44.1% of participants experiencing low depersonalisation, and 60.2% of participants experiencing high personal accomplishment.

Four studies found that burnout levels were average/moderate. Three studies found that participants had moderate levels of overall burnout or emotional exhaustion, depersonalisation and personal accomplishment (Alqahtani et al., 2020; Berry & Robertson, 2019; McTiernan & McDonald, 2014), with only 8.76% indicating that they were 'burnt out' for all subscales (McTiernan & McDonald, 2014), and 16.4% reporting severe or very severe burnout (Alqahtani et al., 2020). However, Hamaideh (2011) concluded that only the mean scores for depersonalisation and personal accomplishment were in the moderate range. Despite this, Hamideh found that there appeared to be a wide range in scoring, with the majority of participants actually scoring low for depersonalisation (49.7%) and personal accomplishment (50.8%), indicating that there may have been a minority of participants scoring very high, which affected the overall results and conclusions.

Six studies found that burnout levels were high. Three studies found that all areas of burnout were high (Kim & Kweon, 2020; Levert et al., 2000; Payne et al., 2020), with Levert et al. (2000) identifying personal accomplishment as a particular problem, given that 93.4% of participants experienced very little personal accomplishment. One study found that only emotional exhaustion and depersonalisation were high (Madathil et al., 2014), whereas two

studies found that only emotional exhaustion was high, with 54.7% and 51.6% of participants experiencing this respectively (Hamaideh, 2011; Jenkins & Elliott, 2004).

Discussion

The aim of the systematic literature review presented here was to explore which factors may contribute towards mental health nurses developing burnout within a mental health hospital setting. Across the studies included in the final set of articles, there were 12 variables related to organisational factors, nine variables related to personal characteristics, six related to stress, and four related to violence. The number of factors identified is reflective of Duquette et al.'s (1994) view that there is a wide range of factors referred to in the existing literature that may contribute to burnout, and that the variation across studies in terms of which factors are relevant may be indicative of the potentially complex nature of these factors. Despite this, there are several factors where findings appear to be more consistent across studies.

The most significant factor found to be predictive of burnout for mental health nurses working in mental health hospitals is stress. In particular excessive work stress that is not being effectively managed and is causing the individual to feel distressed. This is consistent with the current model of burnout being a form of job stress (Maslach et al., 2001). This review however found that two further factors were found to contribute towards burnout indirectly by first increasing work stress: (i) incidents of workplace violence, and (ii) views regarding organisational structure. More specifically, higher rates of workplace violence, as well as negative views related to the organisational structure can cause excessive work stress, which over a long period of time, if not managed effectively, can result in burnout.

Current research supports the correlation between high violence rates and high levels of burnout in mental health nurses (Duan et al., 2019; Liu et al., 2019), however, this review highlights that high rates of violence, including physical and verbal violence and sexual

harassment, results in high levels of stress, which then leads to burnout. These findings could reflect that these environments are more likely to be unstable and unsafe, with increased rates of restrictive practices, staff turnover and absences due to injuries, and reduced staff morale (Stevenson et al., 2015). These findings are highlighted by the additional findings that problems with ward climate (including how safe the environment feels), staff feeling that they are at a higher risk of threat from patients, and staff experiencing higher client-related difficulties, significantly contribute towards burnout. These factors themselves can all contribute towards increased work stress, and reduce feelings of safety. In addition to this, they can be difficult to both resolve independently and emotionally manage, especially if they have continued for prolonged periods and when working under a busy workload. This is of concern, given Nolan et al.'s (1999) finding that 81% of mental health nurses working in mental health hospitals had experienced violence. As such, particularly mental health nurses who work in mental health hospitals with violent patients are more vulnerable to developing burnout than mental health nurses working in the community.

While the existing literature is less focused on mental health nurses' views and experiences of their work environment, including the organisational structure and processes (Edú-Valsania et al., 2022), the finding that having a negative experience of the organisational structure, especially when this experience is prolonged, caused by multiple negative organisational factors and starts to become more fixed, can lead to excessive stress in the short- and medium-term, but then ultimately evolve into burnout over time, highlights the importance of staffs' perceptions for burnout. For organisations assessing the wellbeing of their staff, understanding staff's opinions on the organisation, and how it runs, appears an important factor to consider, as well as the actual processes themselves.

In support of stress being a significant contributing factor towards burnout, a low sense of coherence was also found to contribute towards burnout. These findings are

consistent with the organisational theory of burnout (Cox et al., 1993; Golembiewski et al., 1983), which identifies burnout as occurring when coping strategies become ineffective at reducing organisational stress experienced. For mental health nurses, however, the finding that psychological capital was found to mediate the causal relationship of stress on burnout is a particularly important finding. Mental health nurses working in mental health hospitals are more likely to care for those with serious mental illnesses. The negative outcomes associated with these patient groups, including poorer engagement in treatment, increased risk of relapses and rehospitalisation, poorer therapeutic relationships, and difficulties building trust with staff (Dixon et al., 2016), in addition to some of the negative factors associated with the work environment, could make it more difficult for mental health nurses to maintain psychological capital at work, therefore increasing their risk of burnout.

Other factors found to contribute towards burnout included professional self-doubt, high secondary traumatic stress, low compassion satisfaction, and low job satisfaction. This supports research that has identified high stress levels relating to increased self-doubt (Cushway & Tyler, 1996), and low job satisfaction (Sullivan & Baghat, 1992). Secondary traumatic stress is viewed as a type of occupational stress (Figley, 1995), and high stress has been found to indirectly predict low compassion satisfaction (Meyer et al., 2015). It is therefore possible that although there may be a direct relationship between these factors and burnout, these factors could cause burnout indirectly via work stress.

In line with existing research (Maslach & Jackson, 1984), the findings from this review that organisational factors, such as job role, high role conflict and ambiguity, high caseload, low autonomy, and low support, are significant contributing factors towards rates of burnout, are consistent with research into burnout (Adebayo & Ezeanya, 2011; Maslach & Leiter, 2005; Peterson, 2008; Tunc & Kutanis, 2009). Furthermore, given that mental health nurses in mental health hospitals experience less supervisory support, autonomy, and a lack

of control over their working conditions (Fielding & Weaver, 1994; Sørgaard et al., 2007), this places them at increased risk to developing burnout.

Personal characteristics appear to have less of an influencing factor in the development of burnout. The findings related to whether gender, age, job seniority or experience are related to burnout were mixed, with some of the studies finding that these factors did contribute towards burnout, and others finding that they did not. This is reflective of current research into personal characteristics and burnout, with some studies finding that these factors do relate (Alimoglu & Donmez, 2005; Duquette et al., 1994), whereas others have reported little independent effects (Yeatts et al., 2018). The variation within this scoring could be accounted for by various reasons, including that studies are undertaken in different countries, and so personal characteristics, including values, may be difficult to compare, as well as the participants working on different wards, including acute, forensic, and older adults. Another explanation could be that personal characteristics are mediating factors in the development of burnout, or are less influential than other factors. According to Berry and Robertson (2019), when age was combined with poor management of the ward, this had a more significant influence on burnout than age alone.

Limitations

One of the main limitations of the present review is that the overall external validity of the studies used was limited. It is therefore difficult to know whether the results can be applied to other mental health hospitals, or whether they were caused by factors that are not generalisable. The studies included very few details relating to the size and scope of the mental health hospitals, and were conducted in different countries, with wards that varied in security, length of average stay, patient group, and treatment focus. These differences made comparing the studies and identifying and accounting for possible confounding variables very difficult, as there are likely to be differences within national policies, processes, cultural

attitudes of staff, patients' needs, and models of professional practice, that could have influenced the results.

The internal validity of the studies was generally mixed, with six of the studies having poor validity. Most of the studies lacked detailed information regarding other possible outcomes that could have been explored, as well as some areas of analysis, such as whether the study was sufficiently powered to detect an intervention effect. It is therefore unclear whether there is a direct relationship between the independent variables used within the studies and burnout, or whether the outcomes have been influenced by other variables. Previous research has highlighted the complex nature in which burnout develops (Duquette et al., 1994), and without having clarity regarding which variables directly influenced the outcomes, the reliability of the results may be impacted. This is particularly important when exploring possible interventions to reduce burnout, as the effectiveness of the interventions may decrease if the intervention does not incorporate all relevant variables.

Another limitation with this review was the inclusion of McTiernan and McDonald's (2015) paper. Although initially this paper appeared to provide useful information relevant to the research question, upon reflection, the study's results were difficult to separate in terms of relating to hospital nurses versus community nurses, and therefore ultimately added little to the overall findings. Had this paper been excluded, this may also have allowed for greater consistency among and more in-depth analysis of the remaining papers within the review. While some variation across the studies would have remained, this could have been limited further through the exclusion of this paper.

Directions for Future Research

From the findings of this review, it may be beneficial to pursue more experience-based research. When searching for studies, there was a scarcity of studies that had adopted a qualitative methodology in exploring staff's experiences related to burnout within mental

health hospitals. As mental health hospitals can vary widely in how they function, including patient groups, organisational procedures, and hospital sizes, it would be useful to gain some insight into the experiences of mental health nurses, and mental healthcare staff more broadly, particularly as this would shed light on other underlying aspects that may contribute to burnout. This can include views and beliefs about organisational structures, support, and patients.

In addition to this, studies should also focus on more comparative studies using large samples, whereby different groups of mental health nurses working within mental health hospitals can be compared. This could include nurses from different hospitals, countries or services. From this, some of the differences regarding individual and working factors may be able to be identified further, particularly given the lack of clarity within this study regarding possible confounding variables and the potential variation within culture, working practices and interpersonal dynamics found. Ensuring that studies remain transparent regarding details of their participants and the hospitals and wards would also help provide clear information regarding this.

Practical Implications

The findings from this review reinforce the impact that work stress can have on the development of burnout, and highlights how certain organisational factors can increase burnout through increasing levels of work stress, specifically by increasing work stress to a degree whereby it is experienced negatively, excessively and is not effectively managed over time. The factors identified as contributing to burnout were also more likely to be found in mental health hospitals, including workplace violence, placing mental health nurses who work in such settings at a significantly increased risk of developing burnout (compared to mental health nurses who work in other healthcare settings), with potentially nearly all mental

health nurses affected. This is particularly relevant for mental health nurses in settings where high levels of violence are present, such as forensic/secure hospitals.

To support these nurses, mental health hospitals should therefore have strategies and interventions in place to reduce the risk of burnout. Where possible, these strategies should focus on supporting staff to develop their internal coping strategies, so that they are able to effectively manage higher levels of stress. This will be particularly helpful in alleviating the emotional impact of stressors that are difficult to reduce or remove (e.g. low staffing). This could include increasing psychological capital within the staff force, as well as their sense of coherence. Examples may include building awareness around and offering a variety of different coping strategies for staff to use, as well as providing the space and time to use these when needed at work too. Skills may include those such as mindfulness, grounding techniques and deep breathing. Recognising and rewarding positive work shown by staff, and encouraging the development of mental health skills in nurses, can also help build both self-efficacy, hope and optimism within staff, which will help build psychological capital too. With regards to serious incidents, including those that consist of violent or sexually harmful behaviours, mental health nurses should also be fully supported when these incidents have taken place. This could include using debriefs and ensuring that managerial staff are given the relevant training required to support mental health nurses as compassionately as possible. Organisations may also wish to adopt a trauma-informed model, which would help in supporting all of these recommendations, as the principles that underpin this model are designed to create a physically and psychologically safe environment (Center for Health Care Strategies, 2021), and support patients in their recovery too. This in turn can reduce workforce stress (Isobel & Edwards, 2017), and incidents of violence, which are significant contributors to burnout. Organisations should also focus on understanding the level of stress that their mental health nurses are experiencing, and the potential sources of this stress. In

line with this, understanding mental health nurses' views regarding the organisation would be useful, and working with staff in a collaborative manner to resolve and problem-solve any disputes may be helpful.

References

Abushaikha, L., & Saca-Hazboun, H. (2009). Job satisfaction and burnout among Palestinian nurses. *East Mediterranean Health Journal, 15*(1), 190-197. https://applications.emro.who.int/emhj/1501/15_1_2009_0190_0197.pdf

Adebayo, S. O., & Ezeanya, I. D. (2011). Task identity and job autonomy as correlates of burnout among nurses in Jos, Nigeria. *International Review of Social Sciences and Humanities, 2*(1), 7-13. https://d1wqtxts1xzle7.cloudfront.net/37678598/2_IRSSH-18-V2N1.51195010-libre.pdf?1432042053=&response-content-disposition=inline%3B+filename%3DTask_Identity_and_Job_Autonomy_as_Correl.pdf&Expires=1674838429&Signature=MajvT0qk6qxtKniQ5GzKjLUUo-wMZCxjx144tPpzJnoOCjtSQ6vZ4ldI9FF7TmBX3pL7HYWU4NQKpfzPmWsEf7jzF0fCgrfApn-AuK4t99nP1yjxrgCG6OIOYhZbhO5Bz5N4VkLEq3dwYXQLjyanFwG0iAQ2mXwDwTyt6ah-g~uS0ZNTzrj3GTuQlbUZe1jt4mMhieTovy2Pg-~yBVJy1ylgz55LHiifLPuCCPQX00dbYFufjKR9lEoA8RUxOX4LV-bxXCtSY7TqxtYDPWMEnfQNE0AGa0dM1TyW5WRVadeUVYSzy16bUdvT74O0j1Rq16louHkwdMX--wfmcjRARA__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Alimoglu, M. K., & Donmez, L. (2005). Daylight exposure and the other predictors of burnout among nurses in a University Hospital. *International Journal of Nursing Studies, 42*(5), 549-555. https://doi.org/10.1016/j.ijnurstu.2004.09.001

Alqahtani, R., Al-Otaibi, S., & Zafar, M. (2020). Burnout syndrome among nurses in a psychiatric hospital in Dammam, Saudi Arabia. *Nursing and Midwifery Studies, 9*(2), 110-115. https://doi.org/10.4103/nms.nms_126_19

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art.

Journal of Managerial Psychology, *22*(3), 309-328. https://doi.org/10.1108/02683940710733115

Berry, S. & Robertson, N. (2019). Burnout within forensic psychiatric nursing: Its relationship with ward environment and effective clinical supervision? *Journal of Psychiatric and Mental Health Nursing*, *26*(7-8), 212-222. https://doi.org/10.1111/jpm.12538

Booth, A. (2006). Brimful of STARLITE: Toward standards for reporting literature searches. *Journal of the Medical Library Association*, *94*(4), 421-429. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1629442/

Boyer, S. L., & Bond, G. R. (1999). Does assertive community treatment reduce burnout? A comparison with traditional case management. *Mental Health Services Research, 1*(1), 31-45. https://doi.org/10.1023/A:1021931201738

Branson, D. C. (2019). Vicarious trauma, themes in research, and terminology: A review of literature. *Traumatology*, *25*(1), 2–10. https://doi.org/10.1037/trm0000161

Capel, S., A. (1991). A longitudinal study of burnout in teachers. *British Journal of Educational Psychology*, *61*(1), 36-45. https://doi.org/10.1111/j.2044-8279.1991.tb00959.x

Care Quality Commission (2022, July). *How we do our job*. https://www.cqc.org.uk/what-we-do/how-we-do-our-job/how-we-do-our-job.

Center for Health Care Strategies. (2021). *What is trauma-informed care*. https://www.traumainformedcare.chcs.org/what-is-trauma-informed-care/

Cleary, M., Hunt, G. E., & Horsfall, J. (2010). Identifying and Addressing Bullying in Nursing. *Issues in Mental Health Nursing*, *31*(5),331-335. https://doi.org/10.3109/01612840903308531

Cushway, D., & Tyler, P. (1996). Stress in Clinical Psychologists. *International Journal of*

Social Psychiatry, 42(2), 141-149. https://doi.org/10.1177/002076409604200208

Cushway, D., Tyler, P. A., & Nolan, P. (1996). Development of a stress scale for mental health professionals. *British Journal of Clinical Psychology, 35*(2), 279-295. https://doi.org/10.1111/j.2044-8260.1996.tb01182.x

Cox, T., Kuk, G., & Leiter, M. P. (1993). Burnout, health, work stress and organizational healthiness. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 177-193). Taylor and Francis.

Cragun, J. N., April, M. D., & Thaxton, R. E. (2016). The impact of combat deployment on health care provider burnout in a military emergency department: A cross-sectional professional quality of life scale V survey study. *Military Medicine, 18*, 730–734. https://doi.org/10.7205/MILMED-D-15-00420

Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: A theoretical review. *Human Resources for Health, 18*(41), 1-17. https://doi.org/10.1186/s12960-020-00469-9

Dean, L., Butler, A., & Cuddigan, J. (2021). The impact of workplace violence toward psychiatric mental health nurses: Identifying the facilitators and barriers to supportive resources. *Journal of the American Psychiatric Nurses Association, 27*(3), 189-202. https://doi.org/10.1177/10783903211010945

De Hert, S. (2020). Burnout in healthcare workers: Prevalence, impact and preventative strategies. *Local and Regional Anaesthesia, 13*, 171-183. https://doi.org/10.2147/LRA.S240564

Dickinson, T., & Wright, K. M. (2013). Stress and burnout in forensic mental health nursing: A literature review. *British Journal of Nursing, 17*(2), 82-87. https://doi.org/10.12968/bjon.2008.17.2.28133

Dixon, L. B., Holoshitz, Y., & Nossel, I. (2016). Treatment engagement of individuals experiencing mental illness: Review and update. *World Psychiatry, 15*(1), 13-20. https://doi.org/10.1002/wps.20306

Duan, X., Ni, X., Shi, L., Zhang, L., Ye, Y., Mu, H., Li, Z., Liu, X., Fan, L., & Wang, Y. (2019). The impact of workplace violence on job satisfaction, job burnout, and turnover intention: the mediating role of social support. *Health and Quality of Life Outcomes, 17*(93), 1-10. https://doi.org/10.1186/s12955-019-1164-3

Duquette, A., Kérowc, S., Sandhu, B. K., & Beaudet, L. (1994). Factors related to nursing burnout a review of empirical knowledge. *Issues in Mental Health Nursing, 15*(4), 337-358. https://doi.org/10.3109/01612849409006913

Dyrbye, L. N., Shanafelt, T. D., Johnson, P. O., Johnson, L. A., Satele, D., & West, C. P. (2019). A cross-sectional study exploring the relationship between burnout, absenteeism, and job performance among American nurses. *BMC Nursing, 18*(57), 1-8. https://doi.org/10.1186/s12912-019-0382-7

Edú-Valsania, S., Laguía, A., & Moriano, J. A. (2022). Burnout: A review of theory and measurement. *International Journal of Environmental Research and Public Health, 19*(3), 1-27. https://doi.org/10.3390/ijerph19031780

Edwards, D., Burnard, P., & Coyle, D. (2001). Stress and burnout in community mental health nursing: A review of the literature. *Journal of Psychiatric and Mental Health Nursing, 7*(1), 7-14. https://doi.org/10.1046/j.1365-2850.2000.00258.x

Fielding, J., & Weaver, S. M. (1994). A comparison of hospital- and community-based mental health nurses: Perceptions of their work environment and psychological health. *Journal of Advanced Nursing, 19*(6), 1196-1204. https://doi.org/https://doi.org/10.1111/j.1365-2648.1994.tb01204.x

Figley, C. R. (1993). Coping with stressors on the home front. J*ournal of Social Issues,*

49(4), 51-71. https://doi.org/10.1111/j.1540-4560.1993.tb01181.x

Figley, C. R. (Ed.). (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized.* Routledge. https://doi.org/10.4324/9780203777381

Foster, K., Roche, M., Giandinoto, J.-A., Platania-Phung, C., & Furness, T. (2020). Mental health matters: A cross-sectional study of mental health nurses' health-related quality of life and work-related stressors. *International Journal of Mental Health Nursing, 30*(3), 624-634. https://doi.org/https://doi.org/10.1111/inm.12823

Fourie, W. J., McDonald, S., Connor, J., & Bartlett, S. (2005). The role of the registered nurse in an acute mental health inpatient setting in New Zealand: Perceptions versus reality. *International Journal of Mental Health Nursing, 14*(2), 134-141. https://doi.org/10.1111/j.1440-0979.2005.00370.x

Gergen, K. J. (2001). Psychological science in a postmodern context. *American Psychologist, 56*(10), 803-813. https://doi.org/10.1037/0003-066X.56.10.803

Golembiewski, R. T., Munzenrider, R., & Carter, D. (1983). Phases of progressive burnout and their work site covariants: Critical issues in OD research and praxis. *Journal of Applied Behavioural Science, 19*(4), 461-481. https://doi.org/https://doi.org/10.1177/002188638301900408

Gribben, L., & Semple, C. J. (2021). Factors contributing to burnout and work-life balance in adult oncology nursing: An integrative review. *European Journal of Oncology Nursing, 50*. https://doi.org/https://doi.org/10.1016/j.ejon.2020.101887

Gunasekara, I., Pentland, T., Rodgers, T., & Patterson, S. (2014). What makes an excellent mental health nurse? A pragmatic inquiry initiated and conducted by people with lived experience of service use. *International Journal of Mental Health Nursing, 23*(2), 101-109. https://doi.org/10.1111/inm.12027

Halter, M. J. (2008). Perceived characteristics of psychiatric nurses: Stigma by association. *Archives of Psychiatric Nursing, 22*(1), 20-26. https://doi.org/10.1016/j.apnu.2007.03.003

Hamaideh, S. H. (2011). Burnout, social support, and job satisfaction among Jordanian mental health nurses. *Issues in Mental Health Nursing, 32*(4), 234-242. https://doi.org/10.3109/01612840.2010.546494

Health Education England (2017). *Stepping forward to 2020/21: The mental health workforce plan for England*. Retrieved from https://www.hee.nhs.uk/sites/default/files/documents/Stepping%20forward%20to%20202021%20-%20The%20mental%20health%20workforce%20plan%20for%20england.pdf

House of Lords. (2022). Fit for the future? Rethinking the public service workforce. https://publications.parliament.uk/pa/ld5803/ldselect/pubserv/48/48.pdf

Huarng, A. S. (2001). Burnout syndrome among Information System professionals. *Information Systems Management, 18*(2), 15-20. https://doi.org/10.1201/1078/43195.18.2.20010301/31272.3

Huband, N., Furtado, V., Schel, S., Eckert, M., Cheung, N., Bulten, E., & Völlm, B. (2018). Characteristics and needs of long-stay forensic psychiatric inpatients: A rapid review of the literature. *International Journal of Forensic Mental Health, 17*(1), 45-60. https://doi.org/10.1080/14999013.2017.1405124

Imai, H., Nakao, H., Tsuchiya, M., Kuroda, Y., & Katoh, T. (2004). Burnout and work environments of public health nurses involved in mental health care. *Occupational and Environmental Medicine, 61*(9), 764-768. https://doi.org/10.1136/oem.2003.009134

Isobel, S., & Edwards, C. (2017). Using trauma informed care as a nursing model of care in

an acute inpatient mental health unit: A practice development process. *International Journal of Mental Health Nursing, 26*(1), 88-94. https://doi.org/10.1111/inm.12236

Itzhaki, M., Bluvstein, I., Peles Bortz, A., Kostistky, H., Bar Noy, D., Filshtinsky, V., & Theilla, M. (2018). Mental health nurse's exposure to workplace violence leads to job stress, which leads to reduced professional quality of life. *Frontiers in Psychiatry, 9*(59), 1-6. https://doi.org/10.3389/fpsyt.2018.00059

Jenkins, R., & Elliott, P. (2004). Stressors, burnout and social support: Nurses in acute mental health settings. *Journal of Advanced Nursing, 48*(6), 622-631. https://doi.org/https://doi.org/10.1111/j.1365-2648.2004.03240.x

Joseph, B., & Joseph, M. (2016). The health of the healthcare workers. *Indian journal of occupational and environmental medicine, 20*(2), 71–72. https://doi.org/10.4103/0019-5278.197518

Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical evidence. *Canadian Psychology, 29*(3), 284-297. https://doi.org/10.1037/H0079772

Kanste, O., Kyngäs, H., & Nikkilä, J. (2007). The relationship between multidimensional leadership and burnout among nursing staff. *Journal of Nursing Management, 15*(7), 731-739. https://doi.org/10.1111/j.1365-2934.2006.00741.x

Kim, S., & Kweon, Y. (2020). Psychological capital mediates the association between job stress and burnout of among Korean psychiatric nurses. *Healthcare, 8*(3), 1-11. https://doi.org/10.3390/healthcare8030199

Kobayashi, Y., Oe, M., Ishida, T., Matsuoka, M., Chiba, H., & Uchimura, N. (2020). Workplace violence and its effects on burnout and secondary traumatic stress among mental healthcare nurses in Japan. *International Journal of Environmental Research and Public Health, 17*(8), 1-12. https://doi.org/10.3390/ijerph17082747

Koutsimani, P., Montgomery, A., & Georganta, K. (2019). The relationship between burnout,

depression, and anxiety: A systematic review and meta-analysis. *Frontiers in Psychology, 10*(284), 1-19. https://doi.org/10.3389/fpsyg.2019.00284

Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & Stress, 19*(3), 192-207. https://doi.org/10.1080/02678370500297720

Leiter, M. P., & Schaufeli, W. B. (1996). Consistency of the burnout construct across occupations. *Anxiety, Stress, & Coping, 9*(3), 229-243. https://doi.org/10.1080/10615809608249404

Leo, C. G., Sabina, S., Tumolo, M. R., Bodini, A., Ponzini, G., Sabato, E., & Mincarone, P. (2021). Burnout among healthcare workers in the COVID 19 era: A review of the existing literature. *Frontiers in Public Health, 9*, 1-6. https://doi.org/10.3389/fpubh.2021.750529

Levert, T., Lucas, M., & Ortlepp, K. (2000). Burnout in psychiatric nurses: Contributions of the work environment and a sense of coherence. *South African Journal of Psychology, 30*(2), 36-43. https://doi.org/10.1177/008124630003000205

López-López, I. M., Gómez-Urquiza, J. L., Cañadas, G. R., De la Fuente, E. I., Albendín-García, L., & Cañadas-De la Fuente, G. A. (2019). Prevalence of burnout in mental health nurses and related factors: A systematic review and meta-analysis. *International Journal of Mental Health Nursing, 28*(5), 1035-1044. https://doi.org/10.1111/inm.12606

Liu, J., Zheng, J., Liu, K., Liu, X., Wu, Y., Wang, J., & You, L. (2019). Workplace violence against nurses, job satisfaction, burnout, and patient safety in Chinese hospitals. *Nursing Outlook, 67*(5), 558-566. https://doi.org/10.1016/j.outlook.2019.04.006

Madathil, R., Heck, N. C., & Schuldberg, D. (2014). Burnout in psychiatric nursing:

Examining the interplay of autonomy, leadership style, and depressive symptoms. *Archives of Psychiatric Nursing, 28*(3), 160-166. https://doi.org/10.1016/j.apnu.2014.01.002

Maslach, C. (2006). Understanding job burnout. In A. M. Rossi, P. L. Perrewé, & S. L. Sauter (Eds.), *Stress and Quality of Working Life: Current Perspectives in Occupational Health* (pp. 37-51). Information Age Publishing

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior, 2*(2), 99-113. https://doi.org/10.1002/job.4030020205

Maslach, C., & Jackson, S. E. (1984). Burnout in organizational settings. *Applied Social Psychology Annual, 5*, 133-153. https://smlr.rutgers.edu/sites/default/files/Documents/Faculty-Staff-Docs/BurnoutinOrganizationalSettings.pdf

Maslach, C., & Jackson, S. E. (1996). Maslach Burnout Inventory – Human Services Survey (MBI-HSS). In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), *MBI Manual* (3rd ed.). Consulting Psychologists Press

Maslach, C., & Leiter, M. P. (2005). An organizational approach to burnout. *Stanford Social Innovation Review, 3*(4), 46. https://doi.org/10.48558/904N-8E36

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology, 52*(1), 397-422. https://doi.org/10.1146/annurev.psych.52.1.397

McTiernan, K., & McDonald, N. (2015). Occupational stressors, burnout and coping strategies between hospital and community psychiatric nurses in a Dublin region. *Journal of Psychiatric and Mental Health Nursing, 22*(3), 208-218. https://doi.org/10.1111/jpm.12170

Meadors, P., Lamson, A., Swanson, M., White, M., & Sira, N. (2009). Secondary

traumatization in Pediatric healthcare providers: Compassion fatigue, burnout, and secondary traumatic stress. *Omega, 60*(2), 103-128. https://doi.org/10.2190/OM.60.2.a

Melamed, S., Shirom, A., Toker, S., Berliner, S., & Shapira, I. (2006). Burnout and risk of cardiovascular disease: evidence, possible causal paths, and promising research directions. *Psychological Bulletin, 132*(3), 327-353. https://doi.org/10.1037/0033-2909.132.3.327

Mental Health Taskforce Strategy (2016). *The five year forward view for mental health.* Retrieved from https://www.england.nhs.uk/wp-content/uploads/2016/02/Mental-Health-Taskforce-FYFV-final.pdf

Meyer, R. M. L., Li, A., Klaristenfeld, J., & Gold, J. I. (2015). Pediatric novice nurses: Examining compassion fatigue as a mediator between stress exposure and compassion satisfaction, burnout, and job satisfaction. *Journal of Pediatric Nursing, 30*(1), 174-183. https://doi.org/10.1016/j.pedn.2013.12.008

Montgomery, A., Panagopoulou, E., Kehoe, I., & Valkanos, E. (2011). Connecting organisational culture and quality of care in the hospital: Is job burnout the missing link? *Journal of Health Organization and Management, 25*(1), 108-123. https://doi.org/10.1108/14777261111116851

Morse, G., Salyers, M. P., Rollins, A. L., Monroe-Devita, M., & Pfahler, C. (2012). Burnout in mental health services: A review of the problem and its remediation. *Administration and Policy Mental Health and Mental Health Services Research, 39*(5), 341–352 (2012). https://doi.org/10.1007/s10488-011-0352-1

National Heart, Lung, and Blood Institute. (2013). *Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies.* https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools

National Institute for Clinical Excellence (NICE). (2012). *Appendix G Quality appraisal Checklist – quantitative studies reporting correlations and associations.* https://www.nice.org.uk/process/pmg4/chapter/appendix-g-quality-appraisalchecklist-quantitative-studies-reporting-correlations-and.

Newell, J. M., Nelson-Gardell, D., & MacNeil, G. (2015). Clinician responses to client traumas: A chronological review of constructs and terminology. *Trauma, Violence, & Abuse, 17*(3), 306-313. https://doi.org/10.1177/1524838015584365

Newell, J. M., Nelson-Gardell, D., & MacNeil, G. (2016). Clinician responses to client traumas: A chronological review of constructs and terminology. *Trauma, Violence, & Abuse, 17*, 306–313. https://doi.org/10.1177/1524838015584365

Nolan, P., Dallender, J., Soares, J., Thomsen, S., & Arnetz, B. (1999). Violence in mental health care: The experiences of mental health nurses and psychiatrists. *Journal of Advanced Nursing, 30*(4), 934-941. https://doi.org/10.1046/j.1365-2648.1999.01163.x

O'Connor, K., Neff, D. M., & Pitman, S. (2018). Burnout in mental health professionals: A systematic review and meta-analysis of prevalence and determinants. *European Psychiatry, 53*, 74-99. http://.doi.org/10.1016/j.eurpsy.2018.06.003

Oddie, S., & Ousley, L. (2007). Assessing burn-out and occupational stressors in a medium secure service. *The British Journal of Forensic Practice, 9*(2), 32-48. https://doi.org/10.1108/14636646200700011

Park, Y. S., Konge, L., & Artino, R. (2020). The positivism paradigm of research. *Academic Medicine, 95*(5), 690-694. https://doi.org/10.1097/ACM.0000000000003093

Passalacqua, S. A., & Segrin, C. (2012). The effect of resident physician stress, burnout, and empathy on patient-centered communication during the long-call shift. *Health Communication, 27*(5), 449-456. https://doi.org/10.1080/10410236.2011.606527

Payne, A., Koen, L., Niehaus, D. J. H., & Smit, I.-M. (2020). Burnout and job satisfaction of

nursing staff in a South African acute mental health setting. *South African Journal of Psychiatry, 26*(1), 1-6. https://doi.org/10.4102/sajpsychiatry.v26i0.1454

Peterson, U. (2008). Stress and burnout in healthcare workers [thesis, Karolina Institutet]. ProQuest Dissertations Publishing. https://www.proquest.com/openview/4f4e0357fff40ec562764d30dfff0213/1?pq-origsite=gscholar&cbl=2026366&diss=y

Pines A., Aronson, E., & Kafry, D. (1983). *Burnout: From tedium to personal growth.* The Free Press.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology, 52*(2), 126–136. https://doi.org/10.1037/0022-0167.52.2.126

Puntis, S., Rugkåsa, J., Forrest, A., Mitchell, A., & Burns, T. (2015). Associations between continuity of care and patient outcomes in mental health care: A systematic review. *Psychiatric Services, 66*(4), 354-363. https://doi.org/10.1176/appi.ps.201400178

Rauvola, R. S., Vega, D. M., & Lavigne, K. N. (2019). Compassion fatigue, secondary traumatic stress, and vicarious traumatization: A qualitative review and research agenda. *Occupational Health Science, 3,* 297-336. https://doi.org/10.1007/s41542-019-00045-1

Rothschild, B., & Rand, M. (2006). *Help for the helped, self-care strategies for managing burnout and stress: The psychophysiology of compassion fatigue and vicarious trauma.* Norton & Company

Sabella, D., & Fay-Hillier, T. (2014). Challenges in mental health nursing: Current opinion. *Nursing: Research and Reviews, 4,* 1-6. https://doi.org/10.2147/NRR.S40776

Salvagioni, D. A. J., Melanda, F. N., Mesas, A. E., González, A. D., Gabani, F. L., &

Andrade, S. M. D. (2017). Physical, psychological and occupational consequences of job burnout: A systematic review of prospective studies. *PLOS One, 12*(10), 1-29. https://doi.org/10.1371/journal.pone.0185781

Salyers, M. P., Fukui, S., Rollins, A. L., Firmin, R., Gearhart, T., Noll, J. P., Williams, S., & Davis, C. J. (2015). Burnout and self-reported quality of care in community mental health. *Administration and Policy in Mental Health and Mental Health Services Research, 42*(1), 61-69. https://doi.org/10.1007/s10488-014-0544-6

Sorenson, C., Bolick, B., Wright, K., & Hamilton, R. (2016). Understanding compassion fatigue in healthcare providers: A review of current literature. *Journal of Nursing Scholarship, 48*(5), 456-465. https://doi.org/10.1111/jnu.12229

Sørgaard, K. W., Ryan, P., Hill, R., Dawson, I., & the OSCAR Group. (2007). Sources of stress and burnout in acute psychiatric care: Inpatient vs. community staff. *Social Psychiatry and Psychiatric Epidemiology, 42*(10), 794-802. https://doi.org/10.1007/s00127-007-0228-6

Stamm, B. (2010). *The Concise ProQOL Manual: The concise manual for the Professional Quality of Life Scale.* (2nd ed.). Potacello

Stevenson, K. N., Jack, S. M., O'Mara, L., & LeGris, J. (2015). Registered nurses' experiences of patient violence on acute care psychiatric inpatient units: an interpretive descriptive study. *BMC Nursing, 14*(35), 1-13. https://doi.org/10.1186/s12912-015-0079-5

Sullivan, S. E., & Bhagat, R. S. (1992). Organizational stress, job satisfaction and job performance: Where do we go from here? *Journal of Management, 18*(2), 353-374. https://doi.org/10.1177/014920639201800207

Tunc, T., & Kutanis, R. O. (2009). Role conflict, role ambiguity, and burnout in nurses and

physicians at a university hospital in Turkey. *Nursing and Health Sciences*, *11*(4), 410-416. https://doi.org/10.1111/j.1442-2018.2009.00475.x

World Health Organization. (2019). *International classification of diseases and related health problems* (11th ed). https://icd.who.int/

World Health Organization. (2022). *Quality of care.* https://www.who.int/health-topics/quality-of-care#tab=tab-_2

Yang, B. X., Stone, T. E., Petrini, M. A., & Morris, D. L. (2018). Incidence, type, related factors, and effect of workplace violence on mental health nurses: A cross-sectional survey. *Archives of Psychiatric Nursing*, *32*(1), 31-38. https://doi.org/10.1016/j.apnu.2017.09.013

Yeatts, D. E., Seckin, G., Shen, Y., Thompson, M., Auden, D., & Cready, Cynthia M. (2018). Burnout among direct-care workers in nursing homes: Influences of organisational, workplace, interpersonal and personal characteristics. *Journal of Clinical Nursing*, *27*(19-20), 3652-3665. https://doi.org/10.1111/jocn.14267

Chapter 2

Empirical Paper

An Exploration of the Personal Experiences of Forensic Scene Investigators' Daily Work

Abstract

Research has repeatedly shown policing to be an inherently stressful job. Police officers are significantly more likely to experience mental health difficulties than other emergency workers (MIND, 2015), and four times more likely than the general population to develop post-traumatic stress disorder (Bell & Eski, 2015). Many police officers have also been found to retire early or die from job-related stress disorders (Waters & Ussery, 2007). Like police officers, Forensic Scene Investigators (FSIs) also face similar experiences, including victim statements/accounts, disclosures of serious offences, crime scenes, sullied physical evidence, and details of crimes (Slack, 2020). Emerging literature is starting to show that FSIs are at risk of high stress and potential symptoms of trauma within the role (Clark et al., 2015; Mrevlie, 2018). Despite this, there is little research into the personal experiences of FSIs. This study specifically explored the lived experiences of FSIs and their daily work using Interpretative Phenomenological Analysis. Seven participants from the same constabulary in the UK were interviewed. Two superordinate themes were identified: (i) being an FSI is intense and requires personal sacrifices, and (ii) the intensity of the role is often compounded by organisational factors. All participants talked about concepts including the psychological impact of the role and the need to emotionally detach. Findings are discussed in relation to theoretical and practical implications, as well as directions for future research.

Introduction

Policing

Over the years, research has been clear that there are certain professionals, who, due to their job, are at an increased risk of experiencing a high level of stress. The literature has also been clear that some of these professionals are at a particular risk of developing post-traumatic stress disorder (PTSD), vicarious trauma (VT) and/or secondary traumatic stress (STS), including those working in healthcare and emergency services, such as the police (Beck, 2011; Berger et al., 2012; Craun et al., 2014; Wright et al., 2006). STS is described as the emotional impact that individuals experience when in close contact with survivors of trauma. The symptoms often reflect the symptoms of PTSD, however, with STS, the individuals who experience the symptoms did not experience the traumatic event directly, but instead heard about it from a trauma survivor (Figley, 1993). Hearing about traumatic material over time can also result in STS developing (Figley, 1995).

VT is described as a process of change that professionals experience when working empathically with traumatised individuals, which includes changes in the professionals' sense of self, safety, and the world, resulting in symptoms associated with trauma (McCann & Pearlman, 1990). These symptoms include increased arousal, such as a heightened sense of anxiety, irritability, and unexplained anger, as well as sleeplessness, physical complaints, nightmares, and shame (Beaton et al., 1998; Sexton, 1999). Policing as a profession has been widely recognised as being inherently stressful. Compared with other occupational groups, police officers are more likely to witness suffering, death, and life-threatening and traumatic events (Skogstad et al., 2013). They also face many routine occupational stressors, including management issues, shift work, and negative public attitudes, which have been found to be even more stressful than critical incidents and danger (Gershon et al., 2009; Liberman et al.,

2002; Morash & Haarr, 1995). This is due to expectations of the role being dangerous, but not of there being organisational stressors (Gershon et al., 2009).

Between 2015 and 2019, four surveys completed by mental health charities and police organisations explored the mental health in police officers in the UK. They found that between 79.3%-91% of police officers experienced stress, anxiety, poor mental health, or low mood, with 92% reporting that this was caused or made worse by work (Elliott-Davies, 2018; Elliott-Davies & Houdmont, 2016; MIND, 2015). Compared to ambulance, fire brigade and search and rescue workers, police officers had the highest rate of mental health difficulties (MIND, 2015), with 90% exposed to trauma, and almost one in five experiencing symptoms that were consistent with PTSD or complex PTSD (Brewin et al., 2020). Key stressors reported included organisational change, excessive workloads, 'pressure' from management, poor work/life balance and not dealing with traumatic incidents (Elliott-Davies, 2018; MIND, 2015). The response rates for these studies, however, were very low (between 1.5%-15%), and therefore may not be representative of all officers (Foley & Massey, 2021).

Despite this, they are reflective of the current literature, which highlights that police officers reporting higher stress had an increased risk of adverse health outcomes, especially anxiety, depression, burnout, PTSD, and somatisation, where psychological distress is experienced as physical health symptoms (Gershon et al., 2009; Martinussen et al., 2007). Bell and Eski (2015) found that police officers in the UK are four times more likely than the general population to develop PTSD, with a prevalence rate of 13%, and Waters and Ussery (2007) found that many police officers retired early or died from job-related stress disorders, including alcohol abuse and suicide, despite starting their careers in good physical health. Police officers also reported higher negative behavioural outcomes, such as increased alcohol abuse, and spousal abuse (Gershon et al., 2009). Substance misuse, depression, and absence

of a stable intimate relationship were also all found to be risk factors for suicide in police officers (Krishnan et al., 2022).

Foley et al. (2021) completed a systematic literature review using qualitative and quantitative studies exploring secondary trauma and PTSD in police officers working in units including body recovery, sexual offence investigations and road traffic patrols in the UK. A number of studies suggested that the vast majority of officers did not experience anxiety, depression or PTSD due to their job. Nevertheless, the qualitative studies showed that some officers experienced a traumatic response, including avoidance and intrusion, despite denying this. The authors concluded that the findings of their review were an underestimate and were likely impacted by a closed organisational culture that encouraged denying and minimising of the psychological impact of their work on staff. They also reported that the participants in the studies may not have felt able or had the insight to recognise their actual experiences (Foley et al., 2021).

Although this may have been the case for some of the studies within the review, two of the studies suggested the opposite, namely that the low scores were due to the organisation adopting a compassionate and supportive culture that used mental health screening and interventions to support their staff (Tehrani, 2016; Thompson & Solomon, 1991). In addition to this, several of the studies used questionnaires that were adapted or not validated for use with this participant group, potentially impacting the validity of the results. The participants also came from mixed populations, including ranks, roles, and teams, with little information regarding specific data for each group. Therefore, any variation in anxiety, depression or PTSD within the mixed populations may not have been captured within these results. Despite the overall findings, Foley et al.'s study still highlights the important role mental health culture can play regarding staff's openness to discussing and seeking support for anxiety, depression, and PTSD, with a compassionate environment facilitating these behaviours, and

an environment that encourages suppressed emotions acting as a barrier to them. This is particularly important in a role such as policing, where police officers can often resort to strategies such as suppressing their emotions in order to maintain their professionalism at work (Watery & Ussery, 2007), which can then be a precursor in the development of stress-related disorders (Weisinger, 1985).

There are other risk factors for stress and trauma within the police force that have been identified within research. These include length of time in the force (more time increases risk due to resistance being worn away), constantly changing shift patterns that disrupt sleep and family life, violent confrontations, responding to distressing cases, difficulty switching off, not feeling as though staff are making a difference, and a police culture which trivialises staff distressed by difficult or traumatic cases (Foley & Massey, 2021; Waters & Ussery, 2007). However, the relationship between these risk factors and stress and trauma may be more complicated than these studies highlight. Perez et al. (2010) found that law enforcement officers who investigated child sexual abuse material cases would experience lower levels of distress and STS, if they had high professional efficacy (if they felt that they were protecting society through their work), and if they had more supportive relationships outside of work. Therefore, it appears that for police officers, having fewer protective factors to mitigate against the risk factors of work is also important in the development of stress and trauma.

Despite this, much of the existing research into the psychological impact of policing on police officers has focused on front-line police officers, whereas specialist units, who may face similar stressors and potentially traumatic scenes, are largely missing in the literature (Dabney et al., 2013, Rosansky et al., 2019; Slack, 2020).

Forensic Scene Investigators (FSIs)

As part of their role, FSIs (also called Crime Scene Investigators) are regularly exposed to graphic content, including victim statements/accounts and disclosures of serious offences, crime scenes, sullied physical evidence, and details of crimes (Slack, 2020), and are required to examine and collect dead and decomposed bodies and bodily fluids (Rosansky et al., 2019). They visit a variety of different crime scenes and are likely to spend significant time with distressed victims of crime. These cases are frequent and repeated throughout the day. As a result, they are at an increased risk of experiencing mental health difficulties. More specifically, Clark et al. (2015) reported that 63% (of 51 American FSIs) had experienced moderate or high levels of stress following exposure to a traumatic incident at work. Furthermore, Rosansky et al. (2019) found that 9.3% (of 225 American FSIs) had scores suggestive of PTSD, with 50% reporting at least seven symptoms of PTSD. Mrevlje (2018) found that 30% (of 64 Slovenian FSIs) reported moderate or severe symptoms indicative of PTSD. Nho and Kim (2017) found that 20% (of 226 Korean FSIs) scored above the 'high-risk' cut off for PTSD, and Hyman (2004) found that 51% (of 90 Israeli Forensic Identification Unit technicians) had medium- or high-severity scores on intrusion, and 68% had medium- or high-severity scores on avoidance. Despite the small sample sizes across the studies, they draw a worrying picture of the psychological impact of working as an FSI. This is further supported by a literature review by Slack (2020) into experiences of VT and STS among forensic science personnel. Within this review, FSIs reported to present with symptoms of VT and STS as a result of being exposed to potentially distressing material, such as victims' graphic and detailed descriptions of traumatic experiences, and organisational stressors, together having the potential to lead to depression and a lack of empathy for victims.

More specifically, Yoo et al. (2013) found that personality traits, including hostility, competitiveness and impatience, lower emotional intelligence, higher death anxiety, length of career, as well as a higher number of homicide cases worked per week, increased the risk of FSIs experiencing PTSD symptoms. Organisational factors, such as rotational shift patterns, having too much work, concerns around making a mistake, and feeling underappreciated by the organisation, have also been repeatedly found to contribute to increased levels of stress and burnout in FSIs (Clark et al., 2015; Jeanguenat & Dror, 2018; Slack, 2020; Sollie et al., 2017). Although Yoo et al.'s (2013) findings are significant in starting to identify contributing factors in FSIs, more in-depth research is required. The authors used surveys to gather data for their study, and as such, the results may not fully capture all staff, particularly if staff did not wish to participate or be fully open about their experiences. Similar could be said for Clark et al.'s (2015) study, who had a response rate of below 50%. Sollie et al. (2017) used an observational design, and as such, their data could be biased if the FSIs involved had reported in socially desirable ways. Despite this, these studies to start to point towards a similar picture to that of the police officers and offer a starting point for more in-depth and rigorous studies.

Sollie et al. (2017) explored strategies used by FSIs using a mixed-methods study with 35 FSIs from the Netherlands. They found that strategies including emotionally distancing oneself from disturbing cases, searching for positive personal meaning within the work, seeking social support, avoiding potentially distressing work situations, and mentally preparing oneself for potentially disturbing cases were used to enhance mental resilience. Despite this, it is unclear how effective these strategies are and whether they reduce the risk of developing psychological symptoms. Additionally, the context of these strategies is unclear, including whether these strategies are easy to facilitate within the workplace given the busy nature of the work (e.g. seeking social support).

Despite the current emerging literature, Slack (2020) reported that the current literature on FSIs is very limited, with few quantitative studies determining the levels of PTSD, STS, or VT in FSIs. Studies focusing on forensic personnel have often included other forensic science practitioners, such as forensic nurses, bench and digital media analysts, medical examiners and coroners, and/or sexual assault nurse examiners. Terminology has often been inconsistent when describing different stress and trauma concepts, and study instruments have been used to measure concepts that they were not originally designed to measure, impacting the potential validity of the results. In addition to this, qualitative studies focusing solely on FSIs and their wellbeing appear to be sparse. These include Sollie et al.'s (2017) study, which used context analysis, an observational study, and thematic analysis. Given the current emerging literature indicating the potential risk that FSIs may be at for increased stress and their related disorders, as well as PTSD, VT and STS, and the extensive research into police officers and stress, this is an area of research which requires further understanding and focus in order to understand the impact this role can have on FSIs and the most appropriate ways to support them to do their roles effectively.

Present Study

Given that most of the existing literature on the mental health and wellbeing of FSIs has employed quantitative methods, the present study aims to explore and understand FSIs' experiences of their role, how they perceive this job, and how it impacts them and their lives from a qualitative perspective. Therefore, the research question is "what are the lived experiences of FSIs, and how do they make sense of their work/working within this role". From this, FSIs' experiences of working with potentially distressing material, and how this may affect them, will be explored, as well as what their perceptions are of the relationship that exists between them and their organisation with regard to this work. These questions will aid in understanding how FSIs make sense of their role, the cases they see, and their

experiences regarding the running of their organisation. They will also provide more in-depth knowledge around the psychological impact of the role, and how FSIs experience and relate to this impact, as well as whether they feel that they experience trauma responses. Given the potentially traumatic nature of their work, the increased risk of VT, STS and mental health difficulties, minimal qualitative research within this area, and some evidence within police research of cultures that minimise trauma, this question is more focused on FSIs' experiences of the role inclusive of any trauma concepts, rather than directly focusing on specific concepts of trauma.

This research question will be explored using semi-structured interviews, and adopting the analytical approach of Interpretative Phenomenological Analysis (IPA). IPA facilitates the exploration of in-depth accounts of how people make sense of major life experiences, and the meaning they attach to these, thereby allowing researchers to identify similarities and differences across participants' experiences and accounts (Smith et al., 2022). IPA therefore allows for the personal experiences and impacts that FSIs' roles have on their lives to be understood.

Method

Ethical Issues

The study was granted full ethical approval by the Science, Technology, Engineering and Mathematics Ethical Review Committee at the University of Birmingham (see Appendix A). As the researcher, I also adhered to the University of Birmingham's Code of Practice for Research and the British Psychological Society's Code of Ethics and Conduct (2021) throughout the completion of the research. I had no personal or professional relationship, exposure or contact with the participants prior to the study, and my first meeting with them was during the initial recruitment briefing meeting at the constabulary.

During the initial recruitment briefing meeting at the constabulary, the potential participants raised concerns regarding whether any participation within the study would be kept confidential or whether their participation would be recognised by individuals within the constabulary. This included concerns that should they be recognised, this may have short- and/or long-term negative consequences regarding how they are treated by others within the organisation and for their long-term career prospects. For this reason, throughout this study, particular care has been taken to ensure that confidentiality is fully maintained within the study. When choosing the location for the interviews, this decision was made collaboratively with the potential participants to identify a place where they felt they would not be overheard by colleagues or seen attending/leaving the interview. For this reason, the University of Birmingham was chosen instead of the constabulary.

When interviewees completed the participant information sheet (see Appendix B), I chose to not collect personal information, in case this breached confidentiality within the organisation. During transcribing, transcriptions were checked multiple times to assess whether there was any information that could potentially identify the interviewee. If this information was present, then it was either immediately removed (if I deemed that it was likely unique to that interviewee and therefore would identify an individual, e.g. a pet name) or highlighted as possibly identifiable (if I was unsure whether it would identify an individual, e.g. having a dog). Caution would then be taken when deciding whether highlighted information would be incorporated into quotes. During the analysis, participants were given gender-neutral names, with the final quotes being carefully reviewed to ensure that they did not contain potentially identifiable information, such as unusual linguistic choices or personal information, and if this did, then either this section of information was removed or a different quote entirely was chosen.

Context

This study formed part of a wider programme of work that involved exploring the psychological impact of working with potentially distressing material across specialist units within a UK constabulary. My supervisor is a vetted researcher with the constabulary, and has been undertaking research with them for a number of years. For the purpose of this study, participants from the specialist unit of Forensic Scene Investigation were recruited.

Theoretical Underpinnings of IPA

IPA is underpinned by several theoretical concepts: phenomenology, hermeneutics, and ideography. Phenomenology is a philosophical approach to the study of experience and relates to how researchers understand their participants' experiences (Smith et al., 2022). For this study, experience is understood in relation to Heidegger's, Merleau-Ponty's, and Sartre's views. Specifically, the FSIs' experience of their roles, including how they interpret and experience the organisation, elements of their job, and their cases, is influenced by several factors. As FSIs' experiences is viewed as worldly, whereby their experience is influenced by others, these factors include the presence and absence of their FSI colleagues working on their shifts and in their office, their managers, their relationships with other departments, how the FSIs perceive the organisation treats and views FSIs, and how those not in the organisation view the role. For example, their experience of how emotionally difficult a case may be, may be influenced by whether they returned to an empty office afterwards in comparison to an office filled with supporting colleagues, and whether they felt the managers took the time to provide support. In addition to this, their experience will also be felt through their bodies, that is, how they physically and emotionally felt (such as distressed/in a trauma state/tired). For these FSIs, their experience and these influencing factors may have contributed towards what they felt were the most important issues to raise within the

interview. In addition to this, experience can only be understood hermeneutically (i.e. as an interpretation).

On engaging in this project, I had very little fore-understanding in relation to the force's processes, what it was like to work there, or what the FSIs' role inhabited. Therefore, it was easier for me to not put these preconceptions up front when interpreting the data and instead allow this understanding to develop as the interpretation occurred. Despite this, as a therapist, I had my own professional opinions about occupational stress and the management of this, and as such, this was something that I had to be aware of when interpreting the data (see section on Author's Reflections below). To support with the analysis, I interpreted the exploratory noting on several levels, including linguistically, descriptively, and conceptually, all of which were compared with the text on a wider level. This helped with the hermeneutic circle, and helped me to understand what each participant was trying to convey within their discourse.

An idiographic approach was also used, which consists of focusing on individual cases, before drawing them together for further analysis (Smith et al., 2022). As such, the FSIs' experiences are viewed as independent of each other, and from staff working in other constabularies and departments, as they will have influencing factors that are specific to them. However, their experience may provide insight into the psychological impact that cases can have on FSIs, as well as the effect that particular organisational decisions may have. In order to ensure I maintained an idiographic approach throughout, I used a reflective approach for each step of the analysis (see Table 1), in regards to my own decision-making, specifically reflecting on where in the data my analytical choices were based and what factors may be influencing my interpretation. From this, I was able to identify whether these choices were influenced by previous participants or were fully grounded within the data. I also took these reflections regularly to supervision to gain a wider perspective on whether these were

appropriate. I also maintained a reflective diary throughout where I could record my feelings about the data, as well as any wider reflections or interpretations to help increase my insight into how my feelings may be influencing my analysis of the data. When moving onto a new participant, I read through the reflections relevant to the previous participant and included any final conclusive thoughts and summaries, as a way to mentally draw a line under that participant and then move onto the next.

Participants

Seven participants from the same constabulary took part in the study (male = 4, female = 3). Initially, ten participants expressed an interest to take part, however, of these, two did not respond to attempts to further contact them, and one had unexpected personal issues that prevented them from continuing with the study. No additional FSIs contacted the researchers and/or volunteered to participate in the study after this. In line with Smith et al.'s (2022) recommendation for a sample size of between 6-8 interviews for a research project undertaken as part of a professional doctorate, no further attempts to recruit participants were made. To protect the identities of participants, and ensure confidentiality, I chose to collect limited demographic information. In order to participate in the study, FSIs had to have been working in this role for at least 12 months – this time period was established in discussion with the head of the specialist unit as offering a sufficient amount of time to gather experiences representative of the role of FSIs.

Procedure

I visited the constabulary to brief potential participants about the study and explain its purpose. Potential participants were given a copy of the participant information sheet for them to contact myself should they wish to participate. Once this contact had been made, I then arranged the interview for a mutually convenient day and time with each participant via e-mail. I also contacted each participant 24 hours prior to the interview by telephone to

confirm their attendance. Ten participants made contact to take part, however, three withdrew before an interview date could be organised. In total, seven interviews took place. This fits with Smith et al.'s (2022) recommended sample sizes of between 6-10 to ensure that the quality of the analysis can be maintained.

Data Collection

To guide the interviews, I used a semi-structured interview schedule (see Appendix C), with questions centring around the following aspects: (i) the participant's identity, (ii) how relationships fit with work, (iii) how work identity is managed, (iv) a reflection on everything discussed within the interview, (v) desired work-related changes, and (vi) the impact of the daily work on the participant's life. I employed prompts throughout to encourage further discussion, elaboration and reflection.

I completed all interviews between October 2021 and January 2022 in a private room at the University of Birmingham in order to ensure privacy and to protect individuals' participation in the study. Immediately prior to the interview taking place, I reminded participants of the purpose of the study, and checked that they understood the information presented in the participant information sheet. Upon agreement, I invited participants to sign the consent form (see Appendix D). Interviews lasted between 60-75 minutes, were recorded using an encrypted Dictaphone, and transcribed verbatim by myself following the withdrawal period of two weeks. After the interviews, I completed a short debrief with each participant to ensure that they felt fine before leaving the University. I subsequently recorded any reflections or observations within a reflective diary.

Data Analysis

I analysed the data using the steps recommended and outlined by Smith et al. (2022). The steps undertaken to analyse the data are described in Table 1.

Table 1

Description of Steps Taken in line with Smith et al. (2022)

Steps	Description
1. Transcribing	I transcribed the audio recordings of interviews verbatim into a line-numbered transcript, including notable non-verbal utterances and pauses. I then inserted transcripts into a landscape table in Microsoft Word, with the line numbers included in a column on the left, exploratory noting in a column to the right, and experiential statements in a column to the right of the exploratory noting (see Appendix E). This is the first stage of familiarisation.
2. Reading and re-reading	I read and re-read the transcript to become familiar with data, ensure the participant became the focus of analysis, allow a model of the interview structure to develop, develop an awareness of the rapport between myself and participant, and slow down the process.
3. Exploratory noting	I read the transcript line by line and noted down anything of interest within the exploratory noting column. This may include notes describing content, important linguistic features, and conceptual notes. This step allows for semantic content and language to be examined on an exploratory level. When completing the exploratory noting for each participant, I used colour coding to differentiate between the different types of coding, with green font used for linguistic, blue for descriptive, and purple for conceptual coding. Doing this helped me to identify the different layers of noting and any patterns throughout the transcripts (e.g. use of laughter when uncomfortable). I also included some additional conceptual questions or points in purple to aid me in forming experiential statements during step 5 (see Appendix E).
4. Constructing experiential statements	I analysed the exploratory comments by identifying what was important within the notes. I expressed these as statements to reflect the participant's experiences. During this process, statements need to be grounded within the transcript, but allowed to become more conceptual. My interpretations also influenced the statements.
5. My reflections	During stages 1-4, I noted any thoughts or reflections that I had about each participant below the table containing the transcript. I included reflections

	from the interview, on patterns of behaviour, emotions or thoughts that may influence the process, or hypotheses about the participant. Recording my reflections helped inform the analysis process and to potentially identify any biases or influences that I may have imparted onto the results.
6. Searching for connections across experiential statements	To identify how the experiential statements fit together, I cut out each statement on a separate piece of paper (including page number), placed them randomly on a large surface, and reorganised them with themes of statements placed together that feature corresponding experiences. From this, I was also able to develop any relevant sub-themes from the main clusters.
7. Naming Personal Experiential Themes (PETs)	I gave each theme a title to describe its characteristics (PETs), as well as the sub-themes. PETs produce the highest-level organisation with titles that reflect these. I then reorganised the experiential statements within their theme to form a coherent narrative relating to the theme name, and typed up all PETs, sub-themes, and experiential statements into a Word document with accompanying quotes.
8. Continuing the analysis with the remaining cases	I repeated stages 1-7 with all participants. I treated each participant on their own terms to ensure individuality; therefore, analysis from other participants was not used to influence another participant's analysis.
9. Developing Group Experiential Themes (GETs)	I scanned each participant's PETs for similarities and differences on a broad level, and reviewed sub-themes to explore differences. These similarities and differences highlighted shared and unique features of the experiences described, and formed GETs and super-ordinate themes. Once I had identified the GETs, I organised these into a coherent narrative. For each superordinate theme, I read through each participant's experiential statements again and identified multiple quotes that best encapsulated this theme. Although not every theme had quotes from every participant, all participants were included.

Confidentiality

During the interview stage, one participant asked for specific information to be removed immediately following the interview, due to concerns that they may be identifiable within their organisation. I therefore asked explicit questions relating to what the participant

wanted kept in the interview and what they wanted removing and made a note of this. During the transcribing stage, I removed this information and any references to it. I re-read the transcript several times to ensure that this had been done accurately and took these redactions to my supervisors for review. I also redacted any other potentially identifiable information (e.g. partners' names).

Author's Position and Critical Realism

During this research, I held a critical realist viewpoint. This viewpoint suggests that reality exists independently from the observer and is independent of human perception (real). At the same time, there is a world that we as humans know and understand, and this world is constructed from our experiences and perceptions. This world can be seen and/or measured, and so is the world that is studied (empirical) (Danermark et al., 2002). Therefore, critical realism reduces ontology to epistemology, and views the world on three levels. The 'real' world has structures within it that can trigger mechanisms (causal mechanisms). These causal mechanisms, which are also invisible, create objects and events in the 'real' world (actual level). These objects and events have effects that can be observed in the empirical world. Researchers will use individuals' experiences as data to infer what these causal mechanisms are and therefore learn about the 'real' world (Bhaskar, 2008). This therefore means that researchers need to be judgemental of which theories and explanations they apply to their work (Stutchbury, 2021), and that both knowledge and theories can invariably change as more information is gathered (Haigh et al., 2019). Critical realism has developed from an emancipatory worldview (Haigh et al., 2019; Price & Martin, 2018), and so the researcher's choice of theories is even more important to ensure that this worldview is adhered to (Stutchbury, 2021).

A critical realist viewpoint fits with IPA's focus on the experiences of individuals, as individuals' experiences are viewed as empirical and observable. The motivation for

completing this project was to achieve greater understanding concerning how FSIs experience their roles, as well as how their lives are impacted by it (empirical level). This can therefore help inform ways to improve their wellbeing within the role by helping understand what their job role actually entails and requires of the staff (real level), and the psychological and emotional impact that this has on FSIs (actual level). From this, potential strategies could be identified and put in place to mitigate some of the negative psychological and emotional impacts of the role (causal mechanisms and/or actual level), which will then affect how the FSIs experience these (empirical level). For example, one of the findings from this study related to FSIs experiencing a challenging internal conflict between wanting to respond compassionately to cases and wanting to distance themselves emotionally from cases to protect themselves from the psychological harm caused. Regarding this finding, it appears that the role of being an FSI can mean that FSIs are regularly put in situations whereby they are exposed to potentially distressing cases (real). Being exposed to this can cause varying levels of psychological and emotional harm to FSIs (actual). This harm may be experienced by FSIs as emotional distress (empirical), which they then try to disconnect from (agency). This conflicts (actual) with their own values, however, which creates a feeling of internal conflict and further distress (empirical). Understanding FSIs' experiences from their perspectives, including what may be distressing about the role and how they feel about it, can then provide information about the overall psychological and emotional effects on them.

In addition to this, how individuals choose to act (agency) is influenced by social structures. These actions can depend on different factors, including the individual's knowledge, the structure's ability to resist or support change, and opportunities for interaction (Stutchbury, 2021). For social structures, this study closely followed Scott's (2010) five 'social structures' model. This model explores aspects of a social situation that can empower or constrain individuals, which then impacts how individuals choose to act within a situation

(agency). Specifically, the interview questions covered areas related to this model, including the work setting (such as organisational norms and available mental health support), participants' values and ideas regarding their roles, and their identities and how relationships have informed these. Scott's (2010) model includes ideas, values and attitudes that underpin the events in the setting. For this study, this includes narratives and ideas about FSIs and how they should act and function within the role. This is particularly important within this study, as this can heavily influence agency and how empowered FSIs feel/felt to make different choices.

Author's Reflections

As previously mentioned, throughout this study, it became very apparent that there were pre-existing concerns from the participants regarding the organisation's response to the study, including that any involvement within the study would be known within the organisation (see section on Ethical Issues' above). This first became apparent during my first visit to the potential participants, whereby participants expressed frustration and an expectation that the organisation would not take the results from the study seriously, which for some appeared to translate to the study seeming pointless. This concern was also apparent within interviews, where nearly all participants made comments, such as "I'd say this anyway to my managers" and "I don't mind saying this, because I've already complained about it". For me, this felt very overwhelming and unexpected, and I wondered how the FSIs may have understood the context of the study, and how it fit with their own difficulties with the organisation. For the FSIs, being heard felt like a strong emotional message that was reflected both in conversations with them, but also within the interviews. As a result, I could feel that this was something I felt internal pressure to enact, and I felt concerned that the organisation would not respond to the study's findings. In addition to this, I also felt very anxious about ensuring confidentiality, but also reporting the most appropriate results. As such, I felt that I

was straddling the line between ensuring I was not putting participants at risk by exposing them, but also not missing important data, and often was extra cautious when making these decisions, often seeking advice from my supervisors. This felt particularly difficult given the strong emotional message the FSIs appeared to present and the small number of them. As most participants spoke about similar issues, in some ways, this made things easier, as the important issues were clearer, however, trying to order and present them, particularly on a lower level felt more difficult to navigate. In response to these reflections, throughout the process, at every step, I reflected on whether this internal pressure was influencing any of my results or whether they were an accurate reflection of the themes discussed. On further reflection, this was something that I felt particularly anxious about, as I wanted to ensure that the results were accurate and grounded within the data and not just influenced by mine and the participants' emotions. My feelings likely mirrored how some of the participants may have felt participating in the study.

I also wondered whether the participants' views may have influenced which participants had volunteered to do the study. All interviewing participants appeared very passionate about their roles and protecting others, which was something that came out within their interviews. I wondered given the concerns the FSIs had whether this could have acted as a possible barrier to them participating in the study, whether these traits may have helped these particular participants to overcome this barrier and volunteer, whereas other participants may not have felt interested or empowered to do so. I also wondered whether their views may have influenced how they experienced their roles and what they perceived to be the most difficult elements of it.

Another conflict that I was constantly aware of was my role as a researcher. My experience and background are within the role of a therapist (predominantly with forensic clients), and I have little experience as a researcher conducting IPA interviews. Like my

participants, I also am passionate about ensuring others are protected and supported, which is something that I often look for in my practice. Therefore, within the interviews, I regularly noticed the urge to take on the role of therapist, and act in a validating or supportive way reflective of this position. This was something that I was very aware of from the beginning and is likely influenced by my lack of experience interviewing for research. As such, my natural comfort zone would be to revert to the role of therapist, particularly given anxieties about doing the interviews right. These anxieties however allowed me to remain aware of my own actions and choices within the interviews, and although I was able to mostly ignore these urges, I found this difficult and often felt guilty regarding this. This was particularly prevalent during conversations where I felt as though participants were seeking this, and I felt concerned that participants may interpret my actions as a researcher as invalidating. This was emphasised further as my natural reaction is to people-please, and so it felt restricting to ignore these impulses and emotions and focus on the research aspect.

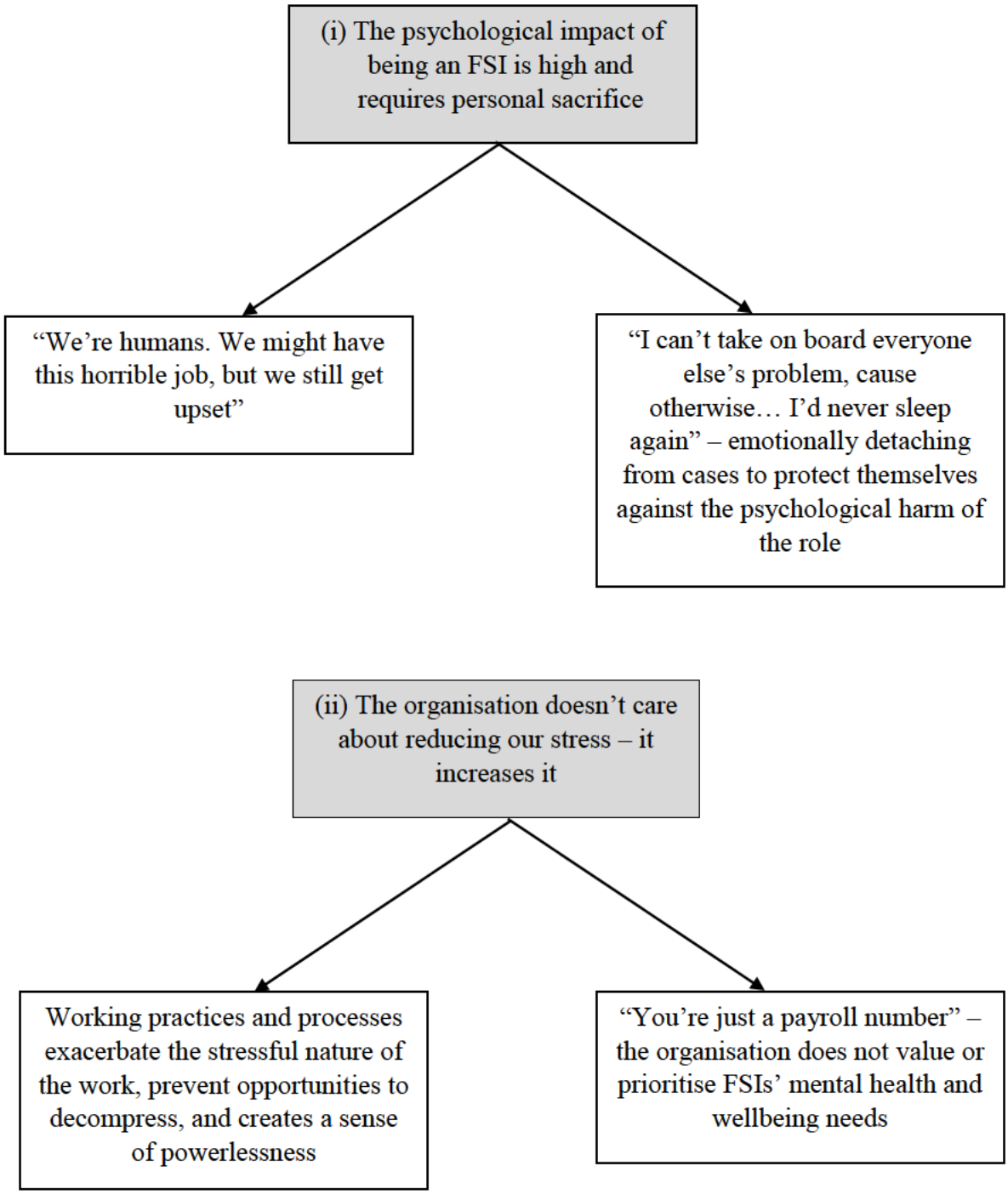
I was also aware of how the participants may relate to myself. Particularly given the participants' concerns and the negative emotion presented to me when I advertised the study, I was concerned that participants may not feel able to connect with myself in a manner which they would feel able to be open within the interviews. Even prior to the interviews, on reflection, I was likely picking up on the sense of alienation that FSIs experience, which likely triggered a need in me to connect with them. I also questioned how FSIs would perceive me, and whether they would perceive me as an academic who is unable to understand and accurately analyse their experiences. However, this was a judgement that came from myself and my own abilities as a researcher, and ultimately did not appear to be an issue within the interviews.

Results

Two superordinate themes were identified. The first – the psychological impact of being an FSI is high and requires personal sacrifice – describes how FSIs are exposed to high levels of stress and potential distress within the role, which has a significant psychological impact on their lives. This superordinate theme is broken down into two subordinate themes: (i) “We’re humans. We might have this horrible job, but we still get upset”, and (ii) “I can’t take on board everyone else’s problem, cause otherwise… I’d never sleep again” – emotionally detaching from cases to protect themselves against the psychological harm of the role. The second superordinate theme – the organisation doesn’t care about reducing our stress – it increases it – describes how the intensity of the role is often compounded by organisational factors. This theme is split into two subordinate themes: (i) Working practices and processes exacerbate the stressful nature of the work, prevent opportunities to decompress, and creates a sense of powerlessness, and (ii) “You’re just a payroll number” – the organisation does not value or prioritise FSIs’ mental health and wellbeing needs. These superordinate themes and their related subordinate themes have been included within Figure 1 below.

Figure 1

Diagram of Themes and Subordinate Themes



Theme 1: The Psychological Impact of Being an FSI is High and Requires Personal Sacrifice

All participants contributed towards this theme, which describes the psychological and emotional impact of being an FSI, with factors such as the intense nature of the role and dealing with difficult cases contributing to this impact.

Subtheme 1: "We're humans. We might have this horrible job, but we still get upset"

This subordinate theme describes the demanding and stressful nature of the role and the psychological impact of this, which was felt by all participants. It also captures the difficult and upsetting choice that FSIs have to face: being human is normal, however, in the role, being human can cause you suffering. This is captured by Sam, who describes how relentless and demanding the job is and how this is further exacerbated by what is perceived to be unnecessary bureaucracy:

> *"There's that little time to decompress and just think about what's happened. Have a lunch break would be nice. Um. But you're thinking "Well I've just got a pile of stuff to sort out" and for me, that's the one thing that I'm gonna lose my s**t about one of these days, just all the paperwork that goes with it, and the addition of it, but like I say, that's half the job, 'cause the other half, it's so fricken – it's so intense, and then you've got that s**t [paperwork] to sort out afterwards." (Sam, 797-802)*

Sam really conveys the sense of how intense the work feels. They highlight how the workload is so overwhelming, it impairs their ability to process any emotional and psychological impact that the cases may potentially have on them (*"little time to decompress")*, and interferes with short or expected breaks (*"just think"/"lunch break would be nice"*) that could otherwise provide the opportunities to *"decompress"*. This sense of being overwhelmed is emphasised by highlighting that all aspects of the role are emotionally

intense (*"lose my shit one of these days"* and *"intense"/"fricken"*), and is such that it weighs on their mind (*"Well I've just got a pile of stuff to sort out"*). Together, these create a sense that the high workload takes a toll on FSIs, and in itself can prevent opportunities to protect against the potential emotional distress caused by cases.

More specifically, Jamie reflected on the potential for distress in light of the complex and unpredictable nature of what they often have to face: *"Most of the time, you don't know if you can deal with something until, you actually do it." (Jamie, 519-520).* This sentiment was shared across all participants – whether one is able to cope with what they have got in front of them in the moment is not something one can predict or prepare for. *"Actually do it"* creates a sense that coping is something out of the norm, but without halfway measures. The responsibility appears to be placed on FSIs, with the ability to cope resting with them (*"if you can deal… until, you actually do it."*). This gives the impression that FSIs are alone in managing their psychological wellbeing, and highlights how significant the impact of a particular moment can be. It also creates a sense that the ability to cope is a fragile notion that cannot be prepared for and can change with just one case. The cognitive response to scenes was described further by Taylor:

> *"If you've just done the post-mortem for it… [pause] what's to say that you're not gonna sit there and think "Oh actually, I held that person's urine in my hands earlier. I held that person's blood in my hands. I swabbed their… psoas muscle. I took a piece of their psoas muscle out. It's sat in the freezer at work. It's… [pause] it's a difficult process." (Taylor, 958-962)*

Here, Taylor is referring to the human details of the work, and the sense that in the moment, the body parts are viewed as objects (*"Oh actually*"). Later, the human element of the job, and that Taylor was physically engaged with those organs on an experiential level (*"I held that person's urine in my hands earlier*"), emerges. The repeated *"I"* emphasises their

involvement, as though they are only realising this. This gives the impression that this is not consciously acknowledged when actually working on cases, and creates a sense that when at crimes scenes, FSIs may think of human remains as objects as a way to unconsciously make attempts to cognitively distance themselves from the work that they do, possibly as a way to manage and protect themselves psychologically from the violent nature of their role. It also highlights how this way of thinking is different to a normal human way of thinking, and the conflict/discomfort felt when this human way of thinking comes later. Sam further describes the nature of the psychological impact of what they are having to deal with:

> *"We had to put [them] in the body bag [deceased [child]] and I just give [them] this little toy to sort of keep [them] company and oh my god I left there, and I was like, for some reason, that just stuck in my head, it was one of them little stupid f*****g doll, furry things with the big eyes that look really adorable, like a like a Pixar character, and I remember oh my god, that's like [their] last mate that [they're] ever going have, little […] [one], you're thinking f*****g hell."*
>
> *(Sam, 713-719)*

Like Taylor, Sam speaks about a very compassionate human act for the victim (*"I just give [them] this little toy to sort of keep [them] company"*) and how this act causes Sam to suddenly realise that a child has died (*"you're thinking f*****g hell"*), as though this was not recognised on an emotional level previously. Just like Taylor, there is a sense that once one thought starts, these escalate quickly, and that it is the connecting with victims on a human level that often triggers this realisation and shock respectively. This further creates a sense of how inhuman the job can feel. Sam's description of the situation is very visually detailed, describing the toy and thought process they had at the time. This creates a sense of how emotionally powerful the experience can become for FSIs, and that by engaging in human and compassionate acts with victims, FSIs open themselves up to potential psychological

harm. Jude's account further illustrates how connections with victims can resonate, particularly on a personal level:

> *"Especially like if you can connect it with someone, you know, I had I had grandparents, so if it's old people, you can imagine it's your grandparents who have been burgled or whatever. Or if someone your parents' age or if they look like someone you know, you can link it to your own life then, because you think this could happen to them or me, then that's more difficult, 'cause they're upset and you can't… you know, we're humans. We might have this horrible job, but we still get upset and things…" (Jude, 150-156)*

Jude describes how connecting with victims in their cases, especially when they share similarities with people in their personal lives, creates an awareness that these loved ones could be impacted in the same way. Specifically, Jude describes imagining their own family members in the place of the victims (*"because you think this could happen to them"*), which ultimately causes upset, and highlights the importance for FSIs to be able to separate their job from their personal lives for their own wellbeing. Jude describes the job as "*horrible"*, which seems to be referring to cases, but acknowledges the normality of becoming upset by it, and that despite being in the job a while, they do not get hardened by it (*"we still get upset"*). This creates a sense that the work that FSIs do and the potential emotional distress that can be caused by it is something that cannot be realistically prevented, as all humans would find it distressing, and that the normal response of becoming upset may not be acknowledged as being normal by others. Taylor further expands on the toll that working as an FSI takes on one's mental health:

> *"You end up having some kind of serious mental breakdown, when you figure out how much you've sacrificed, how much you are exhausted and tired, and how much… I suppose over the years, you've built up in terms of I'd say anger*

towards some of the management for their ignorance and their… insane ability to not listen." (Taylor, 738-742)

For Taylor, the distress is so overwhelming that it impairs their ability to function (*"serious mental breakdown"*). *"Some kind"* creates a sense of certainty of breakdown, as it conveys variation in response, but all are a type of breakdown. For Taylor, the harm is an accumulation of different emotions that develops over time and creates a sense that the role requires physical and emotional sacrifices to be made without the reward. This also creates a sense of how, over time, working in the role can take away parts of an FSI to the point where they are significantly harmed by it. Taylor highlights that this is something that FSIs *"figure out"*, as though there is a lack of awareness or acceptance around this, but that as the sacrifices accumulate, it reaches a point past where it cannot be ignored or refused. Jamie describes how mental health can be impacted by the job:

"It's weird, because when I first started, it seemed that the only way out of the door for people a lot of the time, was when they retire, due to like stress and depression." (Jamie, 425-428)

Jamie describes seeing others distressed in a descriptive way, like that of an observer, with *"it's weird"* emphasising this. This creates a sense of emotional distance between them and this distress, which for Jamie, may have felt a safer way to understand and process this distress, particularly given as they had just started in the role. They also describe how this distress can cause mental illness (*"stress"/"depression"*), which can be significant enough to end careers (*"retire due to"*). This is further emphasised as the *"only way out of the door"*, which appears to suggest that this distress is inevitable and cannot be protected against, as seemingly all staff who have left have succumbed to it. Jamie conveys a sense of certainty and normalisation around FSIs experiencing mental health problems (*"the only way out"*), as though it is accepted as a part of life. Jessie however communicates this differently:

"It can be a bit scary, 'cause, you've seen it happen to people who've been in the job years, and it's just literally one job that does it, um and cause - it could be just one job that causes that, and it could be just one job that sticks with them forever, and it's a bit scary, because you don't know if that if that will happen to you… ." (Jessie, 197-201)

For Jessie, knowing that their mental health could be seriously impacted by the job is frightening, which is emphasised by the repetition of *"it's a bit scary"*. Specifically, Jessie accounts this to not knowing when and which job will trigger it. This is heightened by the use of *"just one job"* being repeated, as again it creates a sense that one job could change everything, and that mental health is fragile and can change rapidly. This also creates a feeling that FSIs lack control and power to protect themselves, which is reinforced by *"just one job that sticks with them forever"*, as it highlights that the impact can be permanent.

Theme 1: The Psychological Impact of Being an FSI is High and Requires Personal Sacrifice

Subtheme 2: "I can't take on board everyone else's problem, cause otherwise… I'd never sleep again" – emotionally detaching from cases to protect against the psychological harm of the role

This subordinate theme explores how FSIs find ways to emotionally detach from potential stressors of or at work to protect themselves. All participants spoke about this as an important coping strategy within the role. Sam describes the need to emotionally distance themself from others and anything potentially distressing:

*"I can't take on board everyone else's problem, 'cause otherwise it's… if I could write you a list of the sort of jobs that I went to, if I could take that on board, you know, if I did take that on board, I'd never sleep again. I'd probably f*****g jump out of the window right now." (Sam, 681-684)*

Sam describes the importance of not recognising or acknowledging what they have seen at scenes, and the emotional seriousness of what would happen if they did (*"I'd never sleep again"*). This conveys a sense that FSIs can be exposed to such a high severity of psychological harm when at scenes that their lives could be drastically affected, and that they could even possibly be traumatised as a result. For Sam, not recognising or acknowledging what they have seen appears to be a way to protect themselves from this, and conveys a need to disconnect from cases. *"Take that on board"* creates a sense that the victims' distress or problems can be absorbed by Sam should they not disconnect, and their repeated use of *"if I"* with the pause (*"…"*) emphasises the urgency of not doing this. Their reference to *"jump out of the window right now"* communicates a sense of not coping and that the emotional impact would be too much to deal with. This also conveys just how threatening the prospect of becoming emotionally impacted is, creating a sense of psychological risk to life:

> *"Because of the things that you deal with, you can't… keep going over it… that would… that would make you unwell. You have to do the job and… put it to one side and you know… put it in a box and put it to one side and it's done. If you just - it's kind of the mind set of you do see and hear horrible stuff, but… you are helping someone, so… you just gotta deal with it." (Jessie, 374-378)*

Jessie also describes how the emotional impact of the role can have a detrimental effect on FSIs and their health. This creates a sense that the cases can be so distressing that they stay with FSIs long after they are finished working on them, and that the potential harm from this can cause FSIs to become *"unwell"* and can interfere with their ability to do their job. As such, Jessie highlights that the only way to be able to cope is to cut off from it. Jessie's description of *"put it in a box and put it to one side and it's done"* conveys a sense that the case and the impact of that case is almost physically placed out of the way and forgotten about/avoided. For Jessie, being exposed to potentially difficult material is accepted (*"you do*

see and hear horrible stuff"), and the process of dealing with it is communicated linguistically as simple (*"it's done"*/*"you just gotta deal with it"*). Although Jessie makes this sound easy to do, their frequent use of pauses (*"…"*) conveys a sense of struggle, which feels at odds with this sounding easy. This creates a sense that actually detaching from the role can be difficult to do, and that the FSIs can still be impacted by the role even when trying to detach. Bobbie also described mentally detaching: *"You just deal with it. Carry on like that typical British stiff upper lip. Keep calm and carry on." (Bobbie, 313-314).* Bobbie continues the simple tone of *"just deal with it"* and normalises this by comparing it to the typical British way of dealing with emotions, which is to ignore any distress and continue the task at hand (*"typical British"*/*"Keep calm and carry on"*). This creates a sense that this is an accepted and normal approach for FSIs, with little focus on the potential emotional harm that FSIs are at risk of or on the process of mentally detaching. It also linguistically sounds easy to do, which may itself be a way to detach from the stressful nature of coping within the role. For Sam, detaching is almost described as normal practice: *"You go 'hold on a minute, right, have a word with yourself'."* (*Sam, 719*). *"Right, have a word with yourself"* conveys a sense that detaching is an active choice, and that not detaching is the wrong choice. By describing it as though Sam is talking to themselves, this creates a feeling that there are two sides to Sam, one of which remains alert to ensure that the other is protected against potential harm when on cases. This creates a sense of separation between the human parts of an FSI who may empathise with victims, and the hypervigilant, hardened part of an FSI which is necessary for the role and their own wellbeing. *"Hold on a minute"* again communicates the urgency of this action and the need to stop everything to make sure that Sam is detaching, conveying the importance of it.

The intense nature of the role and the experience of this as described was a significant theme for all participants within the interviews. This intensity however did not always come from difficult cases alone.

Theme 2: The Organisation Doesn't Care About Reducing Our Stress – It Increases It

All participants contributed towards this theme, which describes how the intense and highly stressful nature of the role can often be exacerbated by the organisation, including working practices, processes and lack of effective support offered. It also conveys a feeling of being undervalued and not cared about as a result of this.

Subtheme 1: Working practices and processes exacerbate the stressful nature of the work, prevent opportunities to decompress, and creates a sense of powerlessness

This subordinate theme describes how the difficulties of the job are often compounded by organisational structures and processes. All participants discussed this. Bobbie and Jessie describe how the work patterns can be difficult:

> *"I struggle to flip myself round sometimes, so then I'm like awake until 1 2 o'clock in the mornings when I have to be up at half five on my early and yeah… that bit's exhausting." (Bobbie, 724-726)*
>
> *"And if you've got one of those jobs on a night shift, and combine that with… you know… the hardships of working a night shift, like the tiredness, and [slight laugh] the different things that night shifts do to you." (Jessie, 73-75)*

Both Bobbie and Jessie describe how tiring aspects of the work can be and are able to communicate the extreme nature of this tiredness (*"exhausting"*/*"hardships"*). When Bobbie describes changing shift patterns, *"flip"* conveys how this may feel sudden, like being thrown, with a sense of urgency and loss of control added by the feeling of a countdown (*"1 2 o'clock"*/*"half five"*). Jessie also conveys this by creating a sense that FSIs are victims to working night shifts (*"the different things that night shifts do to you"*), as though agency is

removed. This creates a sense of powerlessness, and having little control over working patterns. Frankie goes on to describe how the processes make work more stressful:

> *"And then you've gotta kind of let's say* fight *for it [submitting evidence], but it's a bit of a no's no, and then you've gotta e-mail certain inspectors and certain people and that's chain's getting bigger and bigger and just…"*
> *(Frankie, 206-208)*

Frankie describes how submitting evidence can be a challenging and slow process. Linguistically, Frankie's use of one sentence conveys how long and complicated the process can feel. The use of the word *"fight"* and the emphasis on it also creates a sense that it is a struggle with an opposing party that requires a level of force or aggression in order to win. This communicates how strongly Frankie feels that the evidence would be useful (because they are willing to *"fight"* for it) and conveys a sense that the different departments are not on the same side, and so may not be working cohesively within the force. Furthermore, it creates a feeling of conflict with and separation between FSIs and the other departments. This lack of cohesion is also mentioned by Taylor:

> *"You know that that the jobs you did earlier probably could have waited, if we'd have been tasked correctly for the stabbing or shooting or whatever it was, when they originally asked for us. […] It's frustrating when you're getting into the early hours of the morning and then you're being tasked for it, because you know for a fact you're not getting off duty on time." (Taylor, 433-439)*

For Taylor, the lack of cohesion is caused by other departments not doing their job properly (*"if we'd have been tasked correctly"*), with the implication being that FSIs are the ones who are negatively affected by this, as they will have to work overtime as a result. Taylor describes this with absolute certainty (*"you know for a fact"*), which creates a sense that this has maybe been a common occurrence before, and as such is an ongoing problem

that FSIs have to face. The moment of realisation is conveyed as occurring during the middle of the shift, and emphasised with a forward and backward reflection (*"you're not getting off"/"the jobs you did earlier"*). These further communicate the frustration felt and creates a feeling of being stuck in the moment of realisation. This also creates a feeling that the FSIs are powerless to prevent this, as the moment of realisation comes too late into the shift, and so there is an inevitability that FSIs' personal lives will then be impacted by having to work late. This feeling was also conveyed by Jude:

> *"It's also very difficult walking into an empty office at the end of the day, because you might have dealt with low level things, but a lot of them and you might just wanna speak to a normal person [colleagues]." (Jude, 607-609)*

Jude highlights how problematic practices can have an impact in terms of managing the difficulties of the role. Jude describes some problems/stressors as *"low level things"*, as though they are unexpected, overlooked issues, which appear to happen frequently and can accumulate throughout the day (*"but a lot of them"*). This highlights that it is not just difficult cases that can have a potential psychological impact on FSIs, but that smaller, less obvious difficulties/issues can too. *"It's also very difficult"* also communicates the emotional impact these stressors can have, further augmented or exacerbated by *"walking into an empty office at the end of the day"*. This highlights how being alone on shift can significantly increase feelings of stress and/or distress caused by work, and the need for FSIs to have an effective way to cope when at work. Specifically, the importance of support from colleagues is conveyed, in particular when stressed. By describing colleagues as *"normal people"*, this creates a sense of similarity between FSIs and a sense of alienation with others not in the role. It also conveys a sense that FSIs are fundamentally different to those not in the role, and perhaps that the experiences they have had may have caused them to change in a way that means that the only people like them, who can support them, are other FSIs.

Sam also spoke about how certain practices can affect the way one is able to deal with and manage the levels of exposure: *"And I can't process anything that's just happened, I've just gotta focus on my red tape b******t now." (Sam, 793-795).* Whilst Jude spoke about low-level stressors, Sam highlights how additional paperwork and bureaucracy somewhat prevents them from being able to process anything they may have just seen or been exposed to (*"I can't process anything"*). This creates a feeling of separation between what FSIs actually need versus what they are told to do by the organisation, and conveys a feeling of either lack of understanding or priority from the organisation in regards to how the role can affect FSIs' wellbeing and the need to support with this. By referring to this as *"red tape b******t"*, this conveys the frustration that Sam is feeling at having to prioritise this, and also suggests a certain awareness that being able to process work would be more beneficial for them, and ultimately allow them to better cope with it. This again conveys a sense that FSIs may lack the agency to be able to prioritise their mental health when needed, and instead have to prioritise organisational needs.

Theme 2: The Organisation Doesn't Care About Reducing Our Stress – It Increases It

Subtheme 2: "You're just a payroll number" – the organisation does not value or prioritise FSIs' mental health and wellbeing needs

All participants spoke about how FSIs' mental health needs are not met by their employer: *"I think… certain things are forgotten about, like when we're at a scene for 15 hours and… sometimes and nobody checks if you're ok, if you want relieving, things like that." (Bobbie, 224-226).* For Bobbie, there is a sense that once at a scene, FSIs are left on their own with no oversight, until they are finished (*"nobody checks"*). This creates a sense of being alone and of being forgotten about by others in the organisation, who perhaps should be responsible for monitoring staff. This itself portrays a feeling that FSIs, and in particular their wellbeing, may be inadvertently perceived to be of lesser value, as others' needs seem to

be prioritised instead. The use of *"15 hours"* illustrates just how long this period can be. By mentioning *"if you're ok"* first, this creates a sense that FSIs may not be, and that being at a scene for this amount of time can contribute towards this. This is reaffirmed by *"if you want relieving"*, which emphasises that FSIs should potentially be replaced after a certain period of time. Again, this appears to convey a feeling that FSIs are unable to seek this support independently and are reliant on others to reach out, creating a sense of powerlessness. Despite the hesitancy within some of the speech (repeated use of *"…"*, the ambiguous *"certain things"* and *"sometimes"*), the sense that FSIs are not supported is felt strongly.

This absence of organisational support was also reported by Taylor: *"Usually it tends to be other people in our office who rings you, but it's not for your colleagues to do that, because it's not their responsibility." (Taylor, 291-292).* Taylor emphasises that colleagues get in touch and check in with one another. *"Usually it tends"* illustrates how this seems to be the norm at work, however, Taylor directly highlights that this need should be met by others (*"it's not their responsibility"*). That other FSIs provide this support communicates a detachment between FSIs and non-FSIs (whether this be another department or managers), as it conveys FSIs as being the only ones who understand and care about each other's needs and as such, prioritise and meet these, whereas others do not. This is emphasised further by FSIs doing this despite it not being within their job role. Jamie spoke about how FSIs' mental health needs are viewed by the force:

> *"We had a… big crash on the [place], and everyone [other attending departments] was offered some type of mental health kind of like support after, and we weren't, and I think it's because a lot of people think like, "Oh it's the FSIs, they do it all the time, it's fine"." (Jamie, 391-394)*

For Jamie, this separation between FSIs and the organisation is heightened as a systemic issue (*"a lot of people"*). Jamie creates a sense that FSIs are treated differently

within the force and are alone in not being understood by highlighting the different treatment offered to FSIs compared to everyone else: specifically that others are offered support and FSIs are not, even when they may need it. For Jamie, the lack of mental health support is explained due to the force not understanding FSIs' mental health needs (*"they do it all the time, it's fine"*), and their expectation that FSIs are somewhat impervious to becoming distressed by difficult cases or have their own independent ways to manage. This again conveys that there is a difference between what FSIs actually need versus what others perceive they need. This was supported by Sam: *"Cause our car gets a service once a year… um… we're just left until we go." (Sam, 805-806).*

Sam's comparison of FSIs to a car conveys the perceived value the force places on supporting FSIs, suggesting that an object was treated better. *"We're left until we go"* creates a sense that the FSIs are left alone when they are struggling and their difficulties are perhaps ignored, despite them needing help. It also creates a sense that the organisation only provides support when their difficulties are more obvious and more serious, by which time, it may be too late. Sam further describes how the organisation are not able to meet these needs:

> *"If you were my [manager] and I went 'Look, I went to this job and it was just nuts, it's just affected me', they'd go, 'Ok, I'll put you on office duties for the next week or two'. You're going, 'That's not helping', and that's what they tend to do, they'll go, 'Right, just sit in the office for two weeks doing admin duties'. […] Um. And that's be their that'd be their solution to it." (Sam, 813-819)*

Sam describes how the current response for support is not effective and can actually make things worse. By using a dialogue, this conveys the decision-making by the organisation and impact it has on FSIs. *"Nuts"* communicates the level of severity that FSIs can be exposed to at scenes and how much distress FSIs could be under when asking for support. The difference between how distressed FSIs may be feeling versus the support

offered communicates how much the organisation does not meet this need, and creates a sense that asking for support is pointless and will only make the situation worse. This further conveys a sense that FSIs are alone in managing their wellbeing, and that trying to seek support will only cause FSIs more problems and is best avoided. There is also a sense that this response further distances the organisation from FSIs, as *"their solution"* further conveys an 'us and them' dynamic. Frankie moves onto the wellbeing support provided:

> *"And there's nothing, apart from a little card with a phone number on, a Wellbeing line, 'You can ring them'. What's the point what's the point in ringing them? I can ring them whenever I want, that's - that's fine, that's fine. But like… I don't need that." (Frankie, 557-560)*

Frankie again highlights the separation between what is needed and what is offered regarding mental health support (*"I don't need that"*). The effectiveness of the support is emphasised when Frankie highlights that *"there's nothing"*, creating a sense that the support needed is personal while the support given is not. Frankie also communicates how staff can respond to these requests by passing the request on to someone else (the Wellbeing line), instead of supporting the FSI themselves. This creates a sense that FSIs' wellbeing needs are viewed as a problem to be avoided or are not a priority for the responder, which communicates a feeling that these needs are not of high value. This lack of support is further conveyed by describing the card as *"little"*, as though this reflects how helpful it is, and by highlighting that the problem is not the action but the result (*"I can ring them whenever"* and *"that's fine"* being repeated). This highlights the feeling of FSIs' wellbeing needs not being understood by the organisation. Bobbie takes this further by conveying that FSIs' sense of safety is missing:

> *"I um… understand the worries that my mum has. Like when - like literally every time I speak to her, if I'm on my way to work, it's for "stay safe", and…*

it's like I don't always have that. It feels like I don't always have that choice." (Bobbie, 901-904)

Bobbie describes their absence of a sense of safety (*"I don't always have that choice"*) as though it is out of their control. This creates a sense of powerlessness in being able to maintain their own safety, as this choice has been removed by the organisation. The reference to a loved one showing concern and encouraging them to *"stay safe"* reinforces Bobbie's sense that they work under potentially dangerous conditions, however, there is a sense that FSIs' safety does not appear to be taken seriously or prioritised by the organisation and that the current safety procedures are not effective. This further creates a feeling that FSIs' safety is not of high enough value within the organisation, and perhaps that they do not care, as Bobbie's safety was a concern for their mother, who does care. This further separates the organisation from those outside of it and from FSIs. The lack of agency was also discussed by Taylor: *"It's like our opinions and concerns are never ever listened to. We don't get asked, we get told. We're just expected to just do it." (Taylor, 637-639).* Taylor elaborates on this lack of agency by indicating a possible culture of *"We don't get asked, we get told"*. There is a sense that the human element of FSIs has been removed (*"our opinions and concerns are never ever listened to"*), and the focus is on the outcomes of the work (*"just do it"*). This creates a sense that FSIs feel that they lack any power or control within their organisation, and that both them and any issues they may raise may be deemed to be not important or problematic to the organisation, particularly if it affects someone's ability to do their role. This was a common theme across participants, with everyone making similar comments to Sam: *"You're just a payroll number. And I I honestly don't think that anyone above the FSI level gives that much of a s**t about you." (Sam, 829-831).* The experience of participants as merely a *"payroll number"* conveys the sense that FSIs do not feel valued as people by their organisation, and as such, those needs may not be deemed important for the

organisation to meet. For participants, factors such as the lack of support, being treated differently, not being involved in decisions, and operational factors being prioritised over personal ones, appear to have led to this sentiment.

Discussion

This research aimed to explore how FSIs experience their daily work and the impact it may have on them. Our findings show that the intense and overwhelmingly busy nature of the role has a significant psychological impact on FSIs. This includes how the intensity of the role can often feel overwhelming and unpredictable. The participants described how they are often faced with a challenging internal conflict between wanting to respond to cases in a compassionate human way, but also knowing that this behaviour can leave them open to significant emotional distress, which may lead to mental health difficulties. Therefore, the need to emotionally disconnect from cases and the importance of this was also highlighted.

In addition to this, the participants described how the difficulties of the role are often compounded by organisational factors. This includes shift patterns, which can be difficult to adjust to, and a lack of cohesion with other units, which can make tasks longer and more difficult. Participants also described how their welfare and mental health needs are often not met, understood, or prioritised by the organisation. As such, they describe how all of these factors can lead to feelings of being undervalued, underappreciated, and not feeling safe on shift. There was also a strong sense of powerlessness experienced by FSIs and a lack of agency within the role. This appeared to be simultaneously caused through having to protect against the potential psychological damage caused by cases, as well as not feeling valued and cared about by the organisation. Both of these created a sense of alienation for the FSIs from the organisation and those not in the role, and a need to support each other instead.

These findings support the emerging literature that FSIs are at an increased risk of experiencing stress, mental health difficulties, and potentially PTSD within their role (Clark

et al., 2015; Hyman, 2004; Mrevlie, 2018; Nho & Kim, 2017; Rosansky et al., 2019). Additionally, they are reflective of the wider literature that shows that police officers are at an increased risk of these difficulties too (Bell & Eski, 2015; Elliott-Davies, 2018; MIND, 2015). This is an important finding for FSIs, as not only does it strengthen the current literature for FSIs regarding this, but it also points to other possible problems that may arise because of this finding. The literature on police officers is very clear that due to this increased stress, police officers are at an increased risk of developing physical health problems, mental health disorders and stress-related behavioural outcomes, including alcohol abuse, suicide, and spousal abuse (Gershon et al., 2009; Waters & Ussery, 2007). Therefore, FSIs could also possibly be at a higher risk of developing these problems too, particularly as participants within this study described some FSIs as having to retire early and leave the role due to mental health difficulties. In addition to this, the study highlights how having to protect themselves from this psychological impact can create a constant internal conflict for FSIs between behaving compassionately, and cutting off from those urges and ignoring them. This is an important finding, as this internal conflict in itself was described to cause psychological distress for FSIs, and appeared to be something that the FSIs had to constantly face. This difficulty fits with professional dissonance, where staff members feel psychological discomfort or stress due to their values conflicting with the requirements of the job (Taylor, 2007). Professional dissonance has been found to be a key factor in the development of burnout in other professionals, including medical physicians (Agarwal et al., 2020). Although more research is needed to explore this within FSIs, including how this discomfort is managed, this is an important finding when exploring burnout in FSIs.

Another finding related to FSIs having to detach emotionally from cases to protect themselves from emotional harm. This has been reported within research as a common strategy among professionals who are exposed to potentially traumatic material. This has

been used by UK police staff working in abuse and protection teams when exposed to abuse material, paramedics during critical incidents, and providers of sexual offending treatment when reflecting on victims' experiences (Avraham et al., 2014; Parkes et al., 2018; Sandhu et al., 2012). This study, however, highlights the conscious decision-making and personal importance among FSIs to actively distance themselves, particularly given the high number of potentially distressing cases they face in a working week. Emotionally detaching as a coping strategy can be explained by the Coping Circumplex Model (Stanisławksi, 2019), which is a model used to describe coping when under stress. This model emphasises that problem-coping and emotion-coping are connected with various coping strategies aligned between the two. This model describes emotionally detaching as an avoidance-oriented coping style (i.e. distracting oneself from the stressor rather than finding a solution) and, more specifically, a coping strategy which entails emotional suppression. This model highlights how the use of avoidance strategies indicates a lack of problem-coping (i.e. attempts made to cognitively or behaviourally solve the problem that causes distress). It appears that for the FSIs in this study, whose problem has been described as taking on victims' distress and becoming emotionally harmed by it, they may not feel that there is a solution to this, particularly as visiting potentially distressing scenes/victims is a core part of their role and cannot be avoided. In addition to this, the described lack of accessible and effective occupational wellbeing support available makes positive emotional coping more difficult, as the FSIs describe having to find their own ways to manage this without organisational support. This might mean that detaching from cases may also become more difficult, and therefore less achievable, particularly as FSIs have less strategies to rely upon to manage both the risk of becoming mentally unwell, and the distressing cases. By detaching, there is also a risk that any traumatic or distressing cases experienced may not be effectively cognitively processed, and as such, may remain unresolved (Foa et al., 1989). This can also

mean that any associated emotions (such as shock) may also not be properly processed, potentially causing unpredictable and negative emotional and physical responses (Parkes et al., 2018). This was spoken about by the FSIs in the study, including how they can often think about what they have done at work when at home.

This study also found that empathising with victims and developing a human connection can prevent this strategy from working. According to Parkes et al. (2018), police staff in abuse and protection teams found detaching more difficult when the staff had been in direct contact with the victims previously. The authors suggested that through this previous interaction, victims may have been viewed as more "tangible" to the staff, making it harder to mentally distance themselves. For the participants in the present study, it appears that empathising and creating a human connection worked in the same way, and prompted the acknowledgement that the victims were humans. The significance of empathising with victims as a trigger for potential emotional distress also supports Slack's (2020) findings that FSIs have exhibited some level of VT after exposure to traumatic material. Working empathically with traumatised individuals is key for the development of VT in staff (McCann & Pearlman, 1990), and so this finding highlights the potential risk for FSIs in developing VT. This risk is increased further by the challenging organisational factors that were described within the study. Slack (2020) reported that stressful work environments can contribute towards VT, and so reports by the participants regarding processes that make tasks burdensome, conflicts with colleagues, and a busy workload, has the potential to make FSIs even more vulnerable. This is particularly relevant, as participants in this study described how stressful work environments in combination with difficult cases made the job feel overwhelming, prevented opportunities to process and emotionally manage difficult cases, and resulted in the participants feeling undervalued and not supported regarding their mental health.

The findings related to a poor systemic mental health culture within the force was also reflective of current research into police culture (Burnett et al., 2019; Parkes et al., 2018). For this study specifically, the lack of validation around mental health difficulties and effective support was highlighted. This fits with the current research which has predominantly described a police culture that struggles to admit to how exposure to potentially distressing material has affected officers, where staff are unable to effectively get help and support, and staff are expected to 'get on with the job' (Hetherington, 1993; Parkes et al., 2018; Walker, 1997). For the FSIs in this study, the results describe the psychological impact that this culture can have on them, such as feeling undervalued, alienated from, and not cared about by their organisation as a result. This may have been due to the overall finding that the intensity of the job is made worse by various organisational factors, including processes, conflicts with other units, and receiving less support than other units, as well as some FSIs trying to seek emotional support, which arguably goes against the cultural norm that seeks to minimise distress experienced by staff. This is an important finding, as there is limited information regarding the psychological impact of occupational stress and culture on FSIs. It is likely that these feelings might influence each other: for example Kanungo (1992) described how alienation can derive from a sense of powerlessness, separation from the context of their work, lack of autonomy and control over tasks, and frustration at failing to achieve personal or organisational objectives. The FSIs strongly conveyed repeated instances of all of these factors throughout their role, most of which were influenced by the belief that the organisation prioritises outcomes over staff needs and by the perceived potential threat of significant psychological harm from cases and the need to protect from them. However, Kanungo (1992) also highlighted how these feelings can lead to consequences, such as poor mental health, increased job dissatisfaction, damage to morale, and higher work absenteeism and turnover. This reaffirms how psychologically damaging the job can be on FSIs, as not

only are FSIs at risk of increased mental health problems due to the cases that they work on, but their views regarding how the organisation treats and values them can also be a significant source of stress and harm for them. The lack of mental health and wellbeing support alongside the perceived priority to complete administration highlighted within this study is even more of a concern given how there appears to be little effective support that the FSIs can access to offset the level of risk that they face. For the FSIs, constant pressure to complete administration and its barrier to accessing support is likely a regular reminder to them of this perceived lack of value to the organisation. This finding therefore highlights how important it is for FSIs to balance the need for administration and bureaucracy while ensuring that their individual needs are understood and regularly met.

Limitations

One of the main limitations with this study is that the participants were recruited from a very small pool (i.e. a small specialist unit was used). Due to this, some participants may not have felt fully comfortable talking openly as part of the interviews, as they may have been concerned that they would be identifiable within their organisation. Some potential participants therefore may not have wanted to participate in the study for this reason, or participants may not have been fully open and honest within the interviews. Another limitation is that the researcher chose to gather minimal demographics for the participants. Although this decision was made to ensure confidentiality of the participants, this also meant that it was more difficult to explore possible similarities and differences amongst the experiences of the participants, and how certain factors could have possibly been linked to their experiences.

Practical Implications and Suggestions for Future Research

In regards to currently available interventions for police officers, there is limited research regarding recommended interventions. The most common interventions often focus

on recognising signs of stress and improving coping strategies, including positive self-talk, deep breathing, and meditation. These interventions, however, do not address organisational stressors or a poor mental health culture, which can be barriers for staff choosing to use these interventions (Anderson et al., 1995; Patterson et al., 2014; Waters & Ussery, 2007). Systematic literature reviews have also struggled to recommend interventions, as they have often struggled with diverse study features, and poor quality studies, such as those with missing information and inappropriately chosen standardised instruments (Patterson et al., 2014; Peñalba et al., 2009; Webster, 2013). This has made assessing the effectiveness of these studies difficult.

Despite that, there are some emerging studies regarding the use of Trauma Risk Management (TRiM) in UK police forces, which is a peer-support process that aims to support employees following traumatic events, reduce stigma, and encourage help-seeking. As with the current literature on interventions for this group, there is only a small number of studies exploring the effectiveness of TRiM within police populations, however, these studies have shown a reduction in PTSD symptoms, sickness absences following exposure to a traumatic event, stigmatised views towards mental health difficulties, and fewer barriers to help-seeking (Hunt et al., 2013; Watson & Andrews, 2018). Despite this, TRiM uses a voluntary approach, which means that a greater insight into the impact of stress and trauma within the role and the need for access to support is also required.

Therefore, an important practical implication highlighted by our findings is for organisations to ensure that the emotional, psychological, and mental health needs of their FSIs are well understood, supported, and valued systemically. The data highlighted the intense nature of the role and the impact it can have on FSIs, and so organisations need to prioritise a positive mental health culture in the workplace that does not stigmatise mental health. Proactive and reactive interventions need to be in place that help build psychological

and emotional resilience for FSIs and reduces emotional suffering and distress, with appropriate interventions tailored to meet FSIs' busy work life and needs. Interventions could include regular team reflective practice meetings, debrief meetings or TRiM following all difficult cases. Providing practical support and advice that can be accessed and taken away on a busy shift would also be necessary, such as cards with mindfulness techniques, coping skills, breathing and grounding exercises, and self-care items, such as flavoured teas and coffee sachets, and sensory items. FSIs should be fully involved within this process, so they can collaboratively identify the most helpful and practical interventions for them. This would help increase the effectiveness of the interventions, build a more open environment around mental health, and increase feelings of being valued by the organisation. More personal support should also be available with fully trained mental health staff who understand both FSIs' roles, and the increased potential of developing trauma responses, and all staff, including managers, should be supported to understand how their role can impact their wellbeing and mental health, as well as potential signs of emotional distress, and how to support this.

Future research should therefore focus on evaluating different interventions for FSIs and identifying which interventions are the most effective. A national study comparing and evaluating interventions used across different police organisations and units, including non-FSI units would be helpful in identifying this. Areas, such as the effectiveness of the interventions, as well as how easy they are to access during a busy working day and different shift patterns, including night shifts, should be prioritised. Focus groups with FSIs could also be completed to investigate from their perspective what they find helpful and unhelpful in an intervention, and the potential barriers to accessing this support.

References

Agarwal, S. D., Pabo, E., & Rozenblum, R. (2020). Professional dissonance and burnout in primary care: A qualitative study. *JAMA Internal Medicine, 180*(3), 395–401. https://doi.org/10.1001/jamainternmed.2019.6326

Anderson, W., Swenson, D., & Clay, D. (1995). Stress management for law enforcement officers. Prentice Hall.

Avraham, N., Goldblatt, H., & Yafe, E. (2014). Paramedics' experiences and coping strategies when encountering critical incidents. *Qualitative Health Research, 24*(2), 194. https://doi.org/10.1177/1049732313519867

Beaton, R., Murphy, S., Johnson, C., Pike, K., & Corneil, W. (1998). Exposure to duty related incident stressors in urban fire fighters and paramedics. *Journal of Traumatic Stress, 11*(4), 821–827. https://doi.org/10.1023/A:1024461920456

Beck, C. T. (2011). Secondary traumatic stress in nurses: A systematic review. *Archives of Psychiatric Nursing, 25*(1), 1-10. https://doi.org/10.1016/j.apnu.2010.05.005

Berger, W., Silva Freire Coutinho, E., Figueira, I., Marques-Portella, C., Pires Luz, M., Neylan, T. C., Marmar, C. R., & Mendlowicz, M. V. (2012). Rescuers at risk: A systematic review and meta-regression analysis of the worldwide current prevalence and correlates of PTSD in rescue workers. *Social Psychiatry and Psychiatric Epidemiology*, 47, 1001–1011. https://doi.org/10.1007/s00127-011-0408-2

Bell, S., & Eski, Y. (2015). '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

Bhaskar, R. (2008). *A realist theory of science*. Routledge. https://doi.org/10.4324/9780203090732

Brewin, C. R., Miller, J. K., Soffia, M., Peart, A., & Burchell, B. (2020). Posttraumatic stress

disorder and complex posttraumatic stress disorder in UK police officers. *Psychological Medicine, 52*(7), 1287-1295. https://doi.org/10.1017/S0033291720003025

British Psychological Society. (2021). *Code of Ethics and Conduct*. https://doi.org/10.53841/bpsrep.2021.inf94

Burnett, M. E., Sheard, I. & St Clair-Thompson, H. (2019). The prevalence of compassion fatigue, compassion satisfaction and perceived stress, and their relationships with mental toughness, individual differences and number of self-care actions in a UK police force. *Police Practice and Research, 24*(1), 383–400. https://doi.org/10.1080/15614263.2019.1617144

Clark, R. D., Distelrath, C., Vaquera, G. S., Winterich, D., & DeZolt, E. (2015). Critical-incident trauma and crime scene investigation: A review of police organizational challenges and interventions. *Journal of Forensic Identification, 65*(6), 929-951. https://collected.jcu.edu/cgi/viewcontent.cgi?article=1033&context=soc-facpub

Craun, S. W., Bourke, M. L., Bierie, D. M., & Williams, K. S. (2014). A longitudinal examination of secondary traumatic stress among law enforcement. *Victims & Offenders, 9*(3). 299-316. https://doi.org/10.1080/15564886.2013.848828

Dabney, D. A., Copes, H., Tewksbury, R., & Hawk-Tourtelot, S. R. (2013). A qualitative assessment of stress perceptions among members of a homicide unit. *Justice Quarterly, 30*(5), 811-836. https://doi.org/10.1080/07418825.2011.633542

Danermark, B., Ekstrom, M., Jakobsen, L., & Karlsson, J.C. (2002). *Explaining Society: Critical realism in the social sciences*. Routledge.

Elliott-Davies, M. (2018). *PFEW Demand, Capacity and Welfare Survey 2018 – Headline*

Statistics December 2018 (Research and Policy Support Report, R101/2018) https://www.polfed.org/media/15355/demandcapacityandwelfaresurveyheadlinestatistics2018-06-02-19-v1.pdf

Elliott-Davies, M., & Houdmont, J. (2016). *Police Federation of England and Wales 2016 Officer Demand, Capacity, and Welfare Survey Initial Report - Descriptive Results.* https://www.polfed.org/media/14061/welfare-survey-2016-pfew-descriptive-results-report-v30.pdf

Figley, C. R. (1993). Coping with stressors on the home front. *Journal of Social Issues, 49*(4), 51-71. https://doi.org/10.1111/j.1540-4560.1993.tb01181.x

Figley, C. R. (Ed.). (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized.* Routledge. https://doi.org/10.4324/9780203777381

Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of post-traumatic stress disorder. *Behavior Therapy, 20*(2), 155–176. https://doi.org/10.1016/S0005-7894(89)80067-X.

Foley, J., Hassett, A., & Williams, E. (2021). 'Getting on with the job': A systematised literature review of secondary trauma and post-traumatic stress disorder (PTSD) in policing within the United Kingdom (UK). *Police Journal: Theory, Practice and Principles, 95*(1), 224-252. https://doi.org/ 10.1177/0032258X21990412

Foley, J., & Massey, L. D. (2021). The 'cost' of caring in policing: From burnout to PTSD in police officers in England and Wales. *Police Journal: Theory, Practice and Principles, 94*(3), 298-315. https://doi.org/10.1177/0032258X20917442

Gershon, R. R. M., Barocas, B., Canton, A. N., Li, X., & Vlahov, D. (2009). Mental,

physical, and behavioral outcomes associated with perceived work stress in police officers. *Criminal Justice and Behavior, 36*(3), 275-289. https://doi.org/10.1177/009385480833001

Haigh, F., Kemp, L., Bazeley, P., & Haigh, N. (2019). Developing a critical realist informed framework to explain how the human rights and social determinants of health relationship works. *BMC Public Health, 19*(1571). https://doi.org/10.1186/s12889-019-7760-7

Hetherington, A. (1993). Traumatic stress on the roads. *Journal of Social Behavior and Personality, 8*(5), 369–378

Hunt, E., Jones, N., Hastings, V., & Greenberg, N. (2013). TRiM: an organizational response to traumatic events in Cumbria Constabulary. *Occupational Medicine,* 63(8), 549–555. https://doi.org/10.1093/occmed/kqt113

Hyman, O. (2004). Perceived social support and secondary traumatic stress symptoms in emergency responders. *Journal of Traumatic Stress, 17*(2), 149-156. https://doi.org/10.1023/B:JOTS.0000022621.27014.0e

Jeanguenat, A. M., & Dror, I. E. (2018). Human factors effecting forensic decision making: Workplace stress and well-being. *Journal of Forensic Sciences, 63*(1), 258-261. https://doi.org/10.1111/1556-4029.13533

Kanungo, R. N. (1992). Alienation and empowerment: Some ethical imperatives in business. *Journal of Business Ethics, 11*, 413–422. https://doi.org/10.1007/BF00870553

Krishnan, N., Steene, L. M. B., Lewis, M., Marshall, D., & Ireland, J. L. (2022). A systematic review of risk factors implicated in the suicide of police officers. *Journal of Police and Criminal Psychology, 37,* 939-951. https://doi.org/10.1007/s11896-022-09539-1

Liberman, A. M., Best, S. R., Metzler, T. J., Fagan, J. A., Weiss, D. S., & Marmar, C. R.

(2002). Routine occupational stress and psychological distress in police. *Policing: An International Journal, 25*(2), 421-439. https://doi.org/10.1108/13639510210429446

Martinussen, M., Richardsen, A. M., & Burke, R. J. (2007). Job demands, job resources, and burnout among police officers. *Journal of Criminal Justice, 35*(3), 239-249. https://doi.org/10.1016/j.jcrimjus.2007.03.001

McCann, I. L., & Pearlman, L. A. (1990). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress, 3,* 131-149. https://doi.org/10.1007/BF00975140

Mrevlje, T. P. (2018). Police trauma and Rorschach indicators: An exploratory study. *Rorschachiana, 39*(1), 1-19. https://doi.org/10.1027/1192-5604/a000097

MIND. (2015). *Blue Light Scoping Survey*. https://www.mind.org.uk/media-a/4857/scoping-survey.pdf

Morash, M., & Haarr, R. N. (1995). Gender, workplace problems, and stress in policing. *Justice Quarterly, 12,* 113-136. https://doi.org/10.1080/07418829500092591

Nho, S. M., & Kim, E. A. (2017). Factors influencing post traumatic stress disorder in crime scene investigators. *Journal of Korean Academy of Nursing, 47*(1), 39-48. https://doi.org/10.4040/jkan.2017.47.1.39

Patterson, G. T., Chung, I. W. & Swan, P. W. (2014). Stress management interventions for police officers and recruits: a meta-analysis. *Journal of Experimental Criminology 10*, 487–513. https://doi.org/10.1007/s11292-014-9214-7

Parkes, R., Graham-Kevan, N., & Bryce, J. (2018). 'I put my "police head" on': Coping strategies for working with sexual offending material. *The Police Journal: Theory, Practice and Principles, 92*(3), 237-263. https://doi.org/10.1177/0032258X18808294

Peñalba, V., McGuire, H., & Leite, J. R. (2008). Psychosocial interventions for prevention of

psychological disorders in law enforcement officers. *Cochrane Database of Systematic Reviews, 16*(3), https://doi.org/10.1002/14651858.CD005601.pub2. PMID: 18646132.

Perez, L. M., Jones, J., Englert, D. R., & Sachau, D. (2010). Secondary traumatic stress and burnout among law enforcement investigators exposed to disturbing media images. *Journal of Police and Criminal Psychology, 25*(2), 113-124. https://doi.org/10.1007/s11896-010-9066-7

Price, L., & Martin, L. (2018). Introduction to the special issue: applied critical realism in the social sciences. *Journal of critical realism, 17* (2), 89–96. https://doi.org/10.1080/14767430.2018.1468148

Rosansky, J. A., Cook, J., Rosenberg, H., & Sprague, J. E. (2019). PTSD symptoms experienced and coping tactics used by Crime Scene Investigators in the United States. *Journal of Forensic Sciences, 64*(5), 1444-1450. https://doi.org/10.1111/1556-4029.14044

Sandhu, D. K., Rose, J., Rostill-Brookes, H., & Thrift, S. (2012). 'It's intense, to an extent': A qualitative study of the emotional challenges faced by staff working on a treatment programme for intellectually disabled sex offenders. *Journal of Applied Research in Intellectual Disabilities, 25*(4), 308–318. https://doi.org/10.1111/j.1468-3148.2011.00667.x

Scott, D. (2010). *Education, epistemology and critical realism.* Routledge. https://doi.org/10.4324/9780203883099

Sexton, L. (1999). Vicarious traumatisation of counsellors and effects on their workplaces. *British Journal of Guidance and Counselling, 27*, 393–403. https://doi.org/10.1080/03069889908256279

Skogstad, M., Skorstad, M., Lie, A., Conradi, H. S., Heir, T., & Weisæth, L. (2013). Work-

related post-traumatic stress disorder. *Occupational Medicine*, *63*(3), 175-182. https://doi.org/10.1093/occmed/kqt003

Slack, D. P. (2020). Trauma and coping mechanisms exhibited by forensic science practitioners: A literature review. *Forensic Science International: Synergy, 2*, 310-316. https://doi.org/https://doi.org/10.1016/j.fsisyn.2020.10.001

Smith, J. A., Flowers, P., & Larkin, M. (2022). *Interpretative Phenomenological Analysis: Theory, Method and Research* (2nd ed.). SAGE publications.

Sollie, H., Kop, N., & Euwema, M. (2017). Mental resilience of Crime Scene Investigators: How police officers perceive and cope with the impact of demanding work situations. *Criminal Justice and Behavior, 44*(12), 1580-1603. https://doi.org/10.1177/0093854817716

Stanisławksi, K. (2019). The Coping Circumplex Model: An integrative model of the structure of coping with stress. *Frontiers in psychology, 10*, 694. https://doi.org/10.3389/fpsyg.2019.00694

Stutchbury, K. (2021). Critical Realism: An explanatory framework for small-scale qualitative studies or an 'unhelpful edifice'?. *International Journal of Research and Method in Education*, *24*(2), 113-128. https://doi.org/10.1080/1743727X.2021.1966623

Taylor, M. F. (2007). Professional dissonance. *Smith College Studies in Social Work, 77*(1). 88-99. https://doi.org/10.1300/J497v77n01_05

Tehrani, N. (2016). Extraversion, neuroticism and secondary trauma in internet child abuse investigators. *Occupational Medicine, 66*(5), 403–407. https://doi.org/10.1093/occmed/kqw004

Thompson, J., & Solomon, M. (1991). Body recovery teams at disasters: trauma or

challenge? *Anxiety Research*, *4*(3), 235–244. https://doi.org/10.1080/08917779108248777

Walker, M. (1997). Conceptual and methodological issues in the investigation of occupational stress. A case study of police officers deployed on body recovery at the site of the Lockerbie air crash. *Policing and Society: An International Journal, 7*(1), 1-17.

Waters, J. A., & Ussery, W. (2007). Police stress: History, contributing factors, symptoms, and interventions. *Policing: An International Journal, 30*(2), 169-188. https://doi.org/10.1108/13639510710753199

Watson, L., & Andrews, L. (2018). The effect of a Trauma Risk Management (TRiM) program on stigma and barriers to help-seeking in te police. *International Journal of Stress Management, 25*(4), 348-356. https://doi.org/10.1037/str0000071

Webster, J. H. (2013). Police officer perceptions of occupational stress: the state of the art. *Policing: An International Journal of Police Strategies & Management*, *36*(3), 636–652. https://doi.org/10.1108/PIJPSM-03-2013-0021

Weisinger, H. (1985). *The anger workout book*. Quill.

Wright, R., Powell, M. B., & Ridge, D. (2006). Child abuse investigation: An in-depth analysis of how police officers perceive and cope with daily work challenges. *Policing: An International Journal*, *29*(3), 498-512. https://doi.org/10.1108/13639510610684728

Yoo, Y. S., Cho, O. H., Cha, K. S., & Boo, Y. J. (2013). Factors influencing post-traumatic stress in Korean forensic science investigators. *Asian Nursing Research, 7*(3), 136-141. https://doi.org/10.1016/j.anr.2013.07.002

Chapter 3

Press releases

(i) Chapter 1 – Negative views about the hospital and experiencing violence increases the risk of burnout in mental health nurses

(ii) Chapter 2 – The emotional burden of being a Forensic Scene Investigator

University of Birmingham

Press Release

24th April 2023

Negative views about the hospital and experiencing violence increases the risk of burnout in mental health nurses

Many factors can contribute towards the development of burnout in nurses, with work stress often being cited as the most important factor. Despite this, research by the University of Birmingham found that for mental health nurses working in mental health hospitals, incidents of workplace violence and views regarding the organisational structure are also significant factors that can lead to burnout.

This review found that for incidents of workplace violence, the higher the frequency of incidents experienced by a nurse, the more likely they are to become burnt out. For views around organisational structure, feeling unsupported, having a poor relationship with management, and having a low opinion of the culture and processes within the organisation increased the risk of burnout. For both factors however, it was found that they did not directly lead to burnout – instead, they caused work stress, which then caused burnout.

Other factors were explored as well as these, including personal characteristics, such as age, gender, job seniority, and experience, and work-related factors, such as caseload, job autonomy, confusion around role, workplace support, wards, job satisfaction, and professional self-doubt. Work-related factors were found to be more important in the development of burnout compared to personal characteristics, with factors such as high caseload, low autonomy, low support and low job satisfaction found to be contributing factors. High self-efficacy, hope, optimism, and resilience however were found protect against burnout.

There is a high risk of burnout developing in mental health nurses who work in hospital. Hospitals can often have their own specific difficulties that are less prominent in other workplace settings and can often struggle to attract and retain their nursing staff. It is therefore important to understand what can contribute towards burnout in their nurses, so that effective interventions can be adopted to reduce this.

A systematic literature review completed at the University of Birmingham explored the contributing factors for burnout in mental health nurses working in mental health hospitals. Twelve quantitative studies were assessed based on their quality, and their results were reviewed.

Due to mental health hospitals often varying in how they function, recommendations for future research included focusing on more experience-based research using a qualitative design, as this would capture this difference more accurately. Recommendations for practical implications included organisations adopting strategies and interventions that reduce violence to reduce the risk of burnout. Organisations should also regularly explore their nurses' experiences and views of the organisation and work to improve this.

For more information, please contact Zoe Alexander at the University of Birmingham at [redacted]

University of Birmingham

Press Release

24th April 2023

The emotional burden of being a Forensic Scene Investigator

Working as a Forensic Scene Investigator (FSI) is a highly stressful and intense role. As such, research completed by the University of Birmingham found that this role can often have a negative impact on FSIs' psychological wellbeing, with FSIs having to find a way to emotionally distance themselves from their cases at crime scenes in order to ensure that their wellbeing and mental health is not harmed. This intensity is often made worse by workplace processes and practices, and the organisation, who are not effectively supporting them in their work.

The emotional impact of the role was spoken about within the interviews and analysis. FSIs expressed how colleagues can often experience mental health problems due to the cases that they have to go to, with these problems sometimes being serious enough to end their jobs. Creating a human connection with victims and cases was repeatedly cited as a potential cause for mental health problems to develop. This drove the need to emotionally cut off from cases, which was described as crucial to being able to remain long-term within the role.

In addition to cases being intense, FSIs spoke about how the processes can make the job overly complicated and can cause FSIs to work overtime to make sure that everything is completed. They spoke about how their wellbeing and safety can often be left unchecked when out at scenes, which can be as long as 15 hours, and how the mental health support and managerial response when FSIs are emotionally struggling is often unhelpful and can sometimes make the problem worse. This has resulted in all the FSIs feeling undervalued by the organisation, with participants describing themselves as "just a payroll number".

FSIs play a crucial part in crime prevention and investigation. FSIs are often exposed to potentially traumatic and difficult crime scenes, yet the impact that this has on them is often overlooked and there is often an expectation for them to get on with the job.

This University of Birmingham project explored the personal experiences of FSIs' daily work using IPA research method. For this method, interviews were completed with working FSIs and the analysis focused on their experiences.

The research recommended that organisations should adopt a positive mental health culture within the workplace, whereby the mental health of staff is understood, prioritised, supported and not stigmatised. Interventions need to be practical and personal and all staff need to understand the importance of and how to support mental health whilst at work.

Future areas identified for research included identifying interventions that would both meet their needs and be accessible when there is often little time to access support.

For more information, please contact Zoe Alexander at the University of Birmingham at [redacted]

Chapter 4

Appendices

(i) Chapter 1 – Literature Review: Contributing Factors to Burnout for Mental Health Nurses working in Hospitals: A Systematic Review

(ii) Chapter 2 – Empirical Research Paper: An Exploration of the Personal Experiences of Forensic Scene Investigators' Daily Work

Appendices for Chapter 1

Appendix A
Full Search Terms Used for Each Database

PsycInfo	Cinahl Plus	Medline	Web of Science
1. exp community mental health services/ OR exp community psychiatry/ OR exp "mental health and illness assessment"/ OR exp mental health programs/ OR exp mental health services/ OR exp primary mental health prevention/ 2. Mental health personnel/ OR exp psychiatric hospital staff/ OR exp psychiatric nurses/ 3. Community mental health centers/ OR exp community mental health/ OR exp crisis intervention services/ OR exp psychiatric clinics/ OR exp suicide prevention centers/ 4. Secure mp 5. Forensic mp 6. Exp Psychiatric Hospitals/ 7. 1 OR 3 8. 7 OR 4 OR 5 OR 6	1. (MH "Community Mental Health Nursing") OR (MH "Psychiatric Nursing+") 2. "nurs* or *care or care* or support worker or staff or employee" Type the above in. 3. (MH "Community Mental Health Services+") OR (MH "Emergency Services, Psychiatric") OR (MH "School Mental Health Services") OR (MH "Substance Abuse and Mental Health Services Administration") OR (MH "Hospitals, Psychiatric") 4. "forensic mental health or secure setting or forensic setting or forensic unit" 5. 3 or 4 6. 2 and 5 7. 1 or 6 8. (MH "Compassion Fatigue") OR (MH "Burnout, Professional+")	1. Psychiatric Nursing/ 2. mental health services/ or exp community mental health services/ or exp emergency services, psychiatric/ 3. exp Hospitals, Psychiatric/ 4. exp Forensic Nursing/ 5. forensic.mp. 6. secure mp 7. 2 or 3 or 5 or 6 8. exp community health workers/ or exp nursing assistants/ 9. health personnel/ or exp caregivers/ or exp faculty, nursing/ or exp nurses/ or exp nursing staff/ 10. nurs*.mp. or *care/ or care* mp. or support worker.mp. 11. 8 or 9 or 10 12. 7 and 11	1. TS= "mental health* staff" 2. TS= "mental health* nurs*" 3. TS= "mental health* care*" 4. TS= "mental health* *care" 5. TS= "mental health* support worker" 6. TS= "mental health* worker" 7. #1 or #2 or #3 or #4 or #5 or #6 8. TS= "psychiatr* nurs*" 9. TS= "psychiatr* staff" 10. TS= "psychiatr* *care" 11. TS= "psychiatr* care*" 12. TS= "psychiatr* health* worker*" 13. #8 or #9 or #10 or #11 or #12 14. TS= "forensic nurs*"

9. Allied health personnel/ OR exp psychiatric aides/ 10. (personnel or worker* or assistant* or nurs* or professional* or care* or team or staff or employee).mp. 11. 8 AND 10 12. 2 OR 9 OR 11 13. Exp Compassion Fatigue/ OR compassion fatigue.mp 14. Burnout.mp 15. Secondary trauma* mp. 16. Vicarious trauma*.mp 17. Secondary victim* mp 18. 13 OR 14 OR 15 OR 16 OR 17 19. 12 AND 18	9. "vicarious trauma*" 10. "secondary victim*" 11. 8 or 9 or 10 12. 7 and 11	13. 1 or 4 or 12 14. exp Compassion Fatigue/ 15. Secondary traumatic stress.mp 16. Vicarious trauma*.mp 17. exp burnout, psychological/ or exp burnout, professional/ 18. secondary victim* mp 19. 14 or 15 or 16 or 17 or 18 20. 13 and 19	15. TS= “forensic *care” 16. TS= “forensic care*” 17. TS= “forensic support worker*” 18. TS= “forensic health* worker*” 19. TS= “forensic staff” 20. #14 or#15 or #16 or #17 or #18 or #19 21. TS= “secure nurs*” 22. TS= “secure staff” 23. TS= “secure *care” 24. TS= “secure care*” 25. #21 or #22 or #23 or #24 26. #7 OR #13 OR #20 OR #25 27. TI= ((“mental health*” OR psychiatry* OR forensic* or secure) NEAR/2 (nurs* OR staff OR care* OR *care OR “support worker*” OR “health* worker*”)) 28. #26 OR #27 29. TS = “compassion fatigue” 30. TS= “secondary traumatic stress” 31. TS= “vicarious trauma*”

			32. TS= “burnout” 33. TS= “secondary victim*” 34. #29 OR #30 OR #31 OR #32 OR #33 35. #28 AND 34

Note. Terms have either been directly inputted into the database search or have been identified by searching through the databases’ relevant subject terms. Each search has also been adapted to suit each database.

Appendix B

NICE Quality Assessment Tool (2012)

Section 1: Population

1.1 Is the source population or source area well described?

- Was the country (e.g. developed or non-developed, type of health care system), setting (primary schools, community centres etc), location (urban, rural), population demographics etc adequately described?

1.2 Is the eligible population or area representative of the source population or area?

- Was the recruitment of individuals, clusters or areas well defined (e.g. advertisement, birth register)?
- Was the eligible population representative of the source? Were important groups underrepresented?

1.3 Do the selected participants or areas represent the eligible population or area?

- Was the method of selection of participants from the eligible population well described?
- What % of selected individuals or clusters agreed to participate? Were there any sources of bias?
- Were the inclusion or exclusion criteria explicit and appropriate?

Section 2: Method of selection of exposure (or comparison) group

2.1 Selection of exposure (and comparison) group. How was selection bias minimised?

- How was selection bias minimised?

2.2 Was the selection of explanatory variables based on a sound theoretical basis?

- How sound was the theoretical basis for selecting the explanatory variables?

2.3 Was the contamination acceptably low?

- Did any in the comparison group receive the exposure?
- If so, was it sufficient to cause important bias?

2.4 How well were likely confounding factors identified and controlled?

- Were there likely to be other confounding factors not considered or appropriately adjusted for?
- Was this sufficient to cause important bias?

2.5 Is the setting applicable to the UK?

- Did the setting differ significantly from the UK?

Section 3: Outcomes

3.1 Were the outcome measures and procedures reliable?

- Were outcome measures subjective or objective (e.g. biochemically validated nicotine levels ++ vs self-reported smoking −)?
- How reliable were outcome measures (e.g. inter- or intra-rater reliability scores)?
- Was there any indication that measures had been validated (e.g. validated against a gold standard measure or assessed for content validity)?

3.2 Were the outcome measurements complete?

- Were all or most of the study participants who met the defined study outcome definitions likely to have been identified?

3.3 Were all the important outcomes assessed?

- Were all the important benefits and harms assessed?
- Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison?

3.4 Was there a similar follow-up time in exposure and comparison groups?

- If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison.
- Analyses can be adjusted to allow for differences in length of follow-up (e.g. using person-years).

3.5 Was follow-up time meaningful?

- Was follow-up long enough to assess long-term benefits and harms?
- Was it too long, e.g. participants lost to follow-up?

Section 4: Analyses

4.1 Was the study sufficiently powered to detect an intervention effect (if one exists)?

- A power of 0.8 (i.e. it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard.
- Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate?

4.2 Were multiple explanatory variables considered in the analyses?

- Were there sufficient explanatory variables considered in the analysis?

4.3 Were the analytical methods appropriate?

- Were important differences in follow-up time and likely confounders adjusted for?

4.6 Was the precision of association given or calculable? Is association meaningful?

- Were confidence intervals or p values for effect estimates given or possible to calculate?
- Were CIs wide or were they sufficiently precise to aid decision-making? If precision is lacking, is this because the study is under-powered?

Section 5: Summary

5.1 Are the study results internally valid (i.e. unbiased)?

- How well did the study minimise sources of bias (i.e. adjusting for potential confounders)?
- Were there significant flaws in the study design?

5.2 Are the findings generalisable to the source population (i.e. externally valid)?

- Are there sufficient details given about the study to determine if the findings are generalisable to the source population?
- Consider: participants, interventions and comparisons, outcomes, resource and policy implications.

Note. The NICE assessment tool (2012) consists of five sections, each with a variety of questions that are designed to assess different sections of the study. Section 1 assesses the key population criteria for determining the study's external validity, whereas sections 2-4 assess the study's internal validity.

Appendix C

Rating Responses for Question in the NICE (2012) Quality Assessment Tool

++	Indicates that for that particular aspect of study design, the study has been designed or conducted in such a way as to minimise the risk of bias.
+	Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that particular aspect of study design.
−	Should be reserved for those aspects of the study design in which significant sources of bias may persist.
Not reported (NR)	Should be reserved for those aspects in which the study under review fails to report how they have (or might have) been considered.
Not applicable (NA)	Should be reserved for those study design aspects that are not applicable given the study design under review (for example, allocation concealment would not be applicable for case–control studies).

Note. The reviewer is asked to rate each question using 1 of 5 responses and to include comments providing details related to this rating. This is to ensure that the rating of each study remains as transparent as possible.

Appendix D

Questions Asked Within the Quality Assessment Tool for Observational and Cross-Sectional Studies (NHLBI, 2013)

Criteria
1. Was the research question or objective in this paper clearly stated?
2. Was the study population clearly specified and defined?
3. Was the participation rate of eligible persons at least 50%?
4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?
5. Was a sample size justification, power description, or variance and effect estimates provided?
6. For the analyses in this paper, were the exposure(s) of interest measured prior to the outcome(s) being measured?
7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?
8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (e.g. categories of exposure, or exposure measured as continuous variable)?
9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?
10. Was the exposure(s) assessed more than once over time?
11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?
12. Were the outcome assessors blinded to the exposure status of participants?
13. Was loss to follow-up after baseline 20% or less?
14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?

Note. All questions were answered with either a yes, no, CD (cannot determine), NA (not applicable), or NR (not reported). Additional notes were provided to aid clarification of response choices.

Appendices for Chapter 2

Appendix A

E-mail Confirming Ethical Approval of the Study

From: Susan Cottam (Research Support Group) [redacted]>
Sent: 18 November 2019 11:01
To: Juliane Kloess (Psychology) <[redacted]>; Michael Larkin (Psychology) <[redacted]>
Cc: Clare Strickland (ForenClinPsyD (SF) FT) [redacted]>
Subject: Application for amendment ERN_19-0650A

Dear Dr Kloess and Dr Larkin

Re: "An Exploration of the Personal Experiences of Digital Forensics Analysts' Daily Work: An Interpretative Phenomenological Analysis"
Application for amendment ERN_19-0650A

Thank you for the above application for amendment, which was reviewed by the Science, Technology, Engineering and Mathematics Ethical Review Committee.

On behalf of the Committee, I can confirm that this amendment now has full ethical approval.

I would like to remind you that any substantive changes to the nature of the study as now amended, and/or any adverse events occurring during the study should be promptly brought to the Committee's attention by the Principal Investigator and may necessitate further ethical review. A revised amendment application form is now available at https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/Research-Ethics/Ethical-Review-Forms.aspx . Please ensure this form is submitted for any further amendments.

Please also ensure that the relevant requirements within the University's Code of Practice for Research and the information and guidance provided on the University's ethics webpages (available at https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/Research-Ethics/Links-and-Resources.aspx) are adhered to and referred to in any future applications for ethical review. It is now a requirement on the revised application form (https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/Research-Ethics/Ethical-Review-Forms.aspx) to confirm that this guidance has been consulted and is understood, and that it has been taken into account when completing your application for ethical review.

Please be aware that whilst Health and Safety (H&S) issues may be considered during the ethical review process, you are still required to follow the University's guidance on H&S and to ensure that H&S risk assessments have been carried out as appropriate. For further information about this, please contact your School H&S representative or the University's H&S Unit at healthandsafety@contacts.bham.ac.uk.

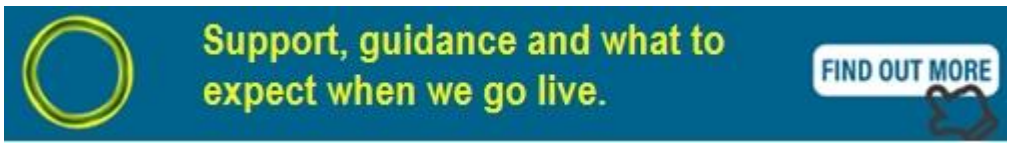
If you require a hard copy of this correspondence, please let me know.

Kind regards

Susan Cottam
Research Ethics Manager
Research Support Group
C Block Dome
Aston Webb Building
University of Birmingham
Edgbaston B15 2TT
Tel: 0121 414 8825
Email: [redacted]
Web: https://intranet.birmingham.ac.uk/finance/RSS/Research-Support-Group/Research-Ethics/index.aspx

Please remember to submit a new Self-Assessment Form for each new project.

Click Research Governance for further details regarding the University's Research Governance and Clinical Trials Insurance processes, or email researchgovernance@contacts.bham.ac.uk with any queries relating to research governance.



Appendix B

Participant Information Sheet

UNIVERSITY OF BIRMINGHAM

Information Sheet for Participants

Study Title: An Exploration of the Personal Experiences of Forensic Scene Investigators' Daily Work

Introduction:
You are being invited to take part in the present study. Please take the time to read through the following information. Ask the relevant person who provided you with the information sheet if you have any questions or would like more information.

What is the purpose of the study?
The purpose of the present study is to hear about your personal experiences of working as a Forensic Scene Investigator. We are interested in how you go about your daily work, what your work means to you, how it may affect you, as well as how you manage this in your personal and professional lives. The study will take the form of an interview between you and the researcher, which will be audio-recorded.

Why have I been chosen?
You have been chosen as you are an employee of […] and work in the area of forensic scene investigations. Other people who work in this area will also be invited to take part.

Do I have to take part? / What happens if I take part?
It is entirely up to you whether you decide to take part in the present study or not. If you decide to take part, you will be given this information sheet to keep and a meeting in the form of an interview will be arranged with you. Even if you decide to take part, you are still free to withdraw from the study at any time up until two weeks post completion of the interview, without having to give any reason. Withdrawing from the study will not affect you or have any negative consequences on your circumstances.

What happens to my information?
The audio recording of your interview, and its subsequent transcription, will be assigned a number, and can therefore not be traced back to you or anyone else. Upon transcription, the audio recording of your interview will be destroyed. Your name will only appear on your consent form, and the researcher will be the only person who has access to a list linking your name with a number. This information will be kept in a secure filing cabinet at the University of Birmingham, and separate from any of the interview data. Upon completion of the research project, the list linking your name with a number will be destroyed.

Will my taking part in this study be kept confidential?
All information that is obtained during the course of the study will be kept strictly confidential. No identifiable information will be included in any write-up or publication using the data of this study.

What will happen to the results of the study?
The results of the study will be analysed to see how people like you personally experience working in forensic scene investigations. The results may be presented at a conference or in a journal. No identifiable

information will be released in any write-up of the results.

What are the risks of participation?
The focus of the interview will be on your personal experiences of working as a Forensic Scene Investigator. While we are interested in how you go about your daily work, what your work means to you, how it may affect you, as well as how you manage this in your personal and professional lives, talking about this during the course of the interview may give rise to feelings of upset and/or distress. If this is the case, you may stop the interview at any time. Should you wish to continue the interview, you may do so when you feel ready. Alternatively, you may withdraw from the study, and your interview data will not be included in the analysis. Should the interview cause you upset and/or distress, please contact […] (Email: […], Tel.: […]), […] (Email: […], Tel.: […]) OR the Be Well Employee Assistance Programme (Tel.: 0808 168 2143). Alternatively, you may get in touch with the following helplines should you wish to talk about any thoughts/feelings that have arisen as a result of the interview.

Mind
Telephone: 0300 123 3393

Mind in Birmingham
https://shop.mind.org.uk/help/mind_in_your_area?loc=Birmingham&council=&lma_search_lat=52.48624299999999&lma_search_lng=-1.8904009999999971

CALM (for men)
Telephone: 0800 58 58 58

The Samaritans
Telephone: 116 123

If you have any additional questions or would like to speak to anyone within the research team about the study before making a decision, please get in touch with Zoe Alexander (E-mail [redacted] or her research supervisor, Dr Juliane Kloess (E-mail: [redacted] Tel.: 0121 414 3571).

Note. For the purpose of this thesis, some information within this document has been redacted to remove any information that may make the constabulary and therefore the participants potentially identifiable. This information consists of the name of the constabulary and contact details of individuals working in the constabulary. Redacted information can be identified by […].

Appendix C

Interview Schedule

1.) While we talk, I would like you to make a diagram, map or picture, which helps me to visualise the different elements of your life. Could you start by representing yourself on the paper in whatever way you like?

Possible prompts: You can use words, symbols or images, whatever you prefer, to represent yourself on the map.

Possible prompts: Where do you fit in alongside your work? What is your relationship with your work? How do you experience it? What does it mean to you?

2.) Can you tell me a bit about what you have done there and why?

Possible prompts: Interviewer to enquire into participant's choices by making simple observation statements (e.g. 'you chose X colour) (these are typically enough to elicit more detail from participants).

3.) Please could you map/tell me about your relationships with important others/those relationships that are most important to you. While you do this, it would be useful if you could think about how these relationships may play a supporting role in you being able to carry out this work on a daily basis and how you cope with it (perhaps even better than others?).

Possible prompts: Interviewer to state what they see, prompt and enquire with a curious mind. Prompts will focus on understanding the quality and nature of each of the relationships, how it is sustained and impacted by the participant's work, with the aim for the participant to describe their relationships in rich detail. The interviewer may subsequently enquire about other people/relationships in the participant's life.

4.) In the context of the relationships, can you tell me a bit about how you 'manage' your work identity (e.g. not being able to discuss your work in detail) in your relationships with these people?

Possible prompts: What is this like for you? What does this mean to/for you?

5.) So now, trying to take a step back and looking at your whole map/everything you've discussed, what do you think/feel?

Possible prompts: Is there anything in particular you are thinking or feeling? (The interviewer may also raise any specific themes that seemed important during the interview, which would benefit from further detail and context.

6.) In an ideal world, is there anything you would change? *(The 'ideal future' question allows participants to explore how they would like their relational lives to be – their expectations, beliefs, fantasies and hopes, however, it may also reveal new information about how things are in the present.)*

7.) Can you tell me a bit more about how you think/feel you may have been affected by your work over time? Have you noticed a change in yourself and/or the way your see/experience your work since you started working in this area?

Possible prompts: What is this like for you? What does this mean to/for you? Do you remember finding it more difficult in the beginning than now? What do you think may have made this process easier for you over time?

Appendix D

Consent Form

UNIVERSITY OF BIRMINGHAM

Consent Form for Participants

I have read and understood the information sheet for the above and have been given the opportunity to ask questions. ☐

I understand that my participation is voluntary and that I am free to withdraw from the study up until _____, without having to give any reason and without me being affected or this having any negative consequences on my circumstances. ☐

I agree to provide information that will be used for research purposes only, and understand that all the information relating to myself obtained as part of the study will be strictly confidential, and that I will not be personally identified in any write-up of the results. ☐

I understand that information will be stored in manual and electronic files and is subject to the provisions of the Data Protection Act. ☐

I wish to participate in this study under the conditions set out here and in the Information Sheet for Participants. ☐

Signed: _____

Printed Name: _____

Date: _____

Thank you very much for agreeing to participate in this study!

Appendix E

Example of Analysis

989.			
990.	P7: Yeah.		
991.			
992.	I: Can you tell me a bit about that?		
993.			
994.	P7: It's a bit… it's a bit of an odd one that… what I mean is when they… when	Doesn't want to explain to others how talking about work has impacted P - hiding	The job can make you feel vulnerable when with your friends
995.	they- if and when they do trigger something [pause], you don't wanna explain it		
996.	to them, as though it's just triggered something in them. I don't know- I can't		
997.	speak for everyone, but personally I don't want it to seem that way, because, I	Finds it difficult when others see that P is struggling	
998.	always think that I that I don't want to show other people that I'm struggling with		
999.	something. If I'm showing to other people that I'm struggling with something, it's	Others noticing is a signal that things are bad	Struggling emotionally/with mental health is a weakness
1000.	gone past the point of which I can handle it. Somebody else needs to intervene	'handle it' physical	
1001.	and there's a problem. So to me, I don't ever want to show them that side, unless	P is unable to manage it – requires others	
1002.	I really need to show them that side. Because in reality, a lot of what we do is	'problem' 'don't ever' - definite	
1003.	quite distressing, if I showed them that weakness every single time, it would be	Showing others means need help	
1004.	like the boy who cried wolf. And then, the one time that I really do need them to	'weakness'	
1005.	listen and I they really do need to do something about it, they won't understand	Only show others struggling if really has to	Those not in the force can never understand just how emotionally difficult the job can be
1006.	that I really do need them to do something. They'll just think "Oh, [they've] had a	FSIs job is 'struggling'	
1007.	wobble several times about several different things". Do you get what I mean?	'the boy who cried wolf'	
1008.		Too frequent	
1009.	I: How does that make you feel?	When do really need support, won't get it because they won't realise how bad it is	
1010.		'had a wobble several times about several different things' – does the workplace culture re mental health impact this thinking?	