

**EXPLORING HOW CRIME ANALYSTS EXPERIENCE WORKING WITH
OTHER PEOPLE'S TRAUMATIC MATERIAL**

by

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Abstract

This thesis examines crime analysts' experiences of working with the traumatic material of others. Initially, the challenges faced by employees working with the traumatic material of others are considered. A systematic review of the literature was conducted, with emphasis on the nature of psychological effects of working with traumatic material upon non front line staff working within the criminal justice system. Current research was identified as varied, inconsistent and inconclusive due to the heterogeneity of the studies. The Hospital Anxiety and Depression Scale was examined for its utility in measuring for well-being within crime analysts. The measure was investigated in terms of its reliability and validity, with reference to its use within clinical and general population settings. Finally, an empirical research study exploring the work of crime analysts employed within the criminal justice system, exposed to the traumatic material of others is described with particular focus on factors that exacerbate their experiences and those factors that are protective to them. The study employed a qualitative approach and template analysis. Results revealed respondents were reporting both positive and negative factors within their work. Their accounts suggested that they were using individual, self-taught approaches to how they managed these factors. Broader organisational issues impacted upon how analysts experienced and managed their exposure to traumatic material. The difficulties of drawing conclusions from cross sectional studies are highlighted throughout the thesis. The utility of the findings are discussed in relation to theoretical and practical implications, with consideration of future research.

Dedication

This thesis is dedicated to my parents, Christine and John Lavis. With thanks to them for a lifetime of the truest love, wisdom, strength, humour and enthusiasm for life - my precious, shining lights.

You are today where the thoughts of yesterday have brought you and you will be tomorrow where the thoughts of today take you.

Blaise Pascal

French Philosopher (1623-1662)

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CHAPTER I - INTRODUCTION

Introduction

The good health of employees is essential for maintaining and enhancing organisational effectiveness and efficiency. In the workplace, employees face a range of job demands of varying types, some of these proving more stressful than others (Ilies, Johnson, Judge, & Keeney, 2011). Cooper (2000) identified that employees were more likely to be absent from work, less productive and more costly for their employer if their health was adversely affected by their work. Clausen, Nielsen, Gomes Carneiro and Borg (2011) suggested that associations between job demands and job resources predicted the level of sickness absence caused by work. Furthermore, excessive job demands reduced the wellbeing of staff to such an extent that it could result in them taking long term sick leave (Schaufeli & Bakker, 2004). The Health and Safety Executive reported that in 2009/10, 9.8 million working days were lost through stress caused by work related issues, with the average time being approximately 22.6 days off work per year, per person suffering (<http://www.hse.gov.uk/statistics/causdis/stress/scale.htm>). Considering these figures alone, work related stress is clearly costly for employers. Stress has become a serious health issue in today's society. It is increasingly important for employers to identify those workers exposed to stressful situations, and to manage these to minimise the potential impact of this work (Schaufeli, Taris, & Van Rhenen, 2008).

Every day, many people are affected by some kind of traumatic event, from abuse and neglect, to accidents, crimes and natural disasters. Perry (2004) (http://www.childtrauma.org/ctamaterials/secTrma2_03_v2.pdf) suggests that exposure to these types of trauma can often result in a variety of emotional and behavioural

difficulties. However, it is not just events such as involvement in accidents and crimes as unfortunate parts of 'everyday' living that can lead to exposure to trauma, certain professionals can be exposed to trauma routinely through their work (Anshel, 2000; Bell, 2003). This can be as a direct result of exposure to traumatic events themselves, for example, through the work of front line emergency staff such as police officers, fire fighters and ambulance staff (Alexander & Klein, 2001; Tak, Driscoll, Bernard, & West, 2007; Yuan, et al., 2011). This can also be due to indirect exposure to a traumatic event such as those working with victims of trauma, and this experience of trauma in an indirect manner is known as secondary traumatisation, secondary exposure (Figley, 1995; Linley & Joseph, 2007). Research has identified that this secondary exposure can impact upon a wide range of professionals (Linley & Joseph, 2007). Sabin-Farrell and Turpin (2003) suggested that there could be serious implications of being exposed to traumatic materials on an ongoing basis.

Traumatic Material and Professionals' Exposure

Crime Analysts working within the Criminal Justice System are likely to be working upon criminal investigations to produce analysis of traumatic events to contribute to the investigative process. This thesis aims to explore how crime analysts within the CJS experience working with other people's traumatic material. Their work may include detailed records of traumatic events that document victims' traumatic experiences. For example, analysts employed within London Metropolitan Police, Serious Organised Crime Agency, West Mercia Police and the Serious Crime Analysis Section may undertake a wide range of tasks including comparative case analysis, tactical and strategic analyses, preparation of witness statements, giving evidence in court as well as developing intelligence packages on prolific offenders (Dr Jessica

Woodhams, personal communication; <http://www.soca.gov.uk/about-soca/serious-crime-analysis-section>; <http://www.npia.police.uk> and (WMPA, 2011). These materials contain details of crimes and traumatic experiences of those involved, and can include post mortem and crime scene photographs, and victim and witness statements (both written and video recorded). It is possible that this work could have an impact upon analysts' emotional experiences, as seen in other studies with professionals working in the CJS (e.g. Chamberlain & Miller, 2009; Deighton, Gurriss, & Traue, 2007).

In the present study, the term 'traumatic material of others' has been selected to refer to potentially traumatising materials, such as those discussed above that form part of any criminal investigation in which crime analysts are working. Research has suggested that information about traumatic incidents, i.e. traumatic material, can have a significant impact on those people exposed to it, for example, Salerno and Bottoms (2009) posited that evidence, including post mortem photographs and victim statements, can have an emotional effect on the moral reasoning of jurors in a trial. Furthermore, Salerno and Bottoms also suggest that both the defence and prosecution in the United States use scene photographs and victim statements to evoke emotional responses in the jury, suggesting the powerful impact of such exposure. Graphic imagery and victim statements have been assessed for their impact upon mock jurors in many studies, the results of which have included a more punitive outcome for defendants, for example, when jurors were shown graphic scene and post mortem photographs in colour (as opposed to black and white) (Douglas, Lyon, & Ogloff, 1997; ForsterLee, Fox, ForsterLee, & Ho, 2004; Myers & Arbuthnot, 1999; Whalen & Blanchard, 1982). Such is the evidence that this exposure to traumatic material has an emotional impact on jurors, it has been recommended that limits be put on the amount of exposure they have

to this type of evidence (Cush & Goodman-Delahunty, 2006). Similarly, victim impact statements containing information about very severe harm to the victim can also produce a more punitive result for the defendant by jurors (Myers, Lynn, & Arbuthnot, 2002).

Insurance claims workers can be exposed to potentially traumatising materials such as post mortem reports, medical records, scenes of crime photographs and collision photographs, where people are killed or seriously injured, in order to produce claims records (Ludick, Alexander, & Carmichael, 2007). Ludick et al. found that this exposure resulted in insurance workers being at moderate risk of developing secondary traumatic stress symptoms. Judges and solicitors have also shown evidence of being affected by their exposure to the traumatic material of other people through their work (Chamberlain & Miller, 2009; Vrkleviski & Franklin, 2008).

Critical Evaluation of Theories on Effects of Exposure to The Traumatic Material

Academic literature has produced a variety of conceptualisations for exploring the impact of indirect exposure to traumatic experiences of others. Figley (1995) suggested that simply the knowledge of another person's traumatic experiences (secondary stressors) can be as traumatising to some people as the actual event to the victim. In other words, learning about a traumatic event can be as traumatising to some individuals as actual harm or the threat of it (primary stressor). However, there does seem to be a lack of consensus in producing a single concept that can succinctly apply to the responses of those individuals so exposed. There have been many terms used to describe this secondary stress response, including, secondary traumatic stress disorder (STSD) (Figley, 1995), vicarious trauma (McCann & Pearlman, 1990), and burnout (Pines & Aronson, 1988).

Each of these will be briefly outlined in turn, together with research linking these terms to those working within the CJS:

The concept of secondary traumatic stress disorder (STSD) is similar to post traumatic stress disorder (PTSD) with similar symptoms, except that it applies to secondary exposure to a traumatic event (i.e. the knowledge about it), not actual exposure to it (which would be PTSD) (Figley, 1995). Symptoms can be physical, psychological and emotional and may include loss of empathy, workaholism, reduce pleasure, poor sleep, depression, anger, hopelessness and high self-expectation (Pfifferling & Gilley, 2000). Dane (2000) and Meyers and Cornille (2002) explored STSD amongst child protection workers and found similar results to those studies of therapists working with sexual assault and abuse, domestic violence and sex offenders. They identified that the symptoms experienced included intrusive thoughts and images, distress, anxiety, depression and anger (particularly in those who had witnessed the deaths of children). In relation to depression, they found that respondents who had experienced more personal trauma in their own lives reported higher levels of depression, anxiety, isolation and feeling distressed than staff who had not. Research has found that STSD symptoms amongst mental health workers working with those affected by September 11th terrorism attacks in the USA found higher levels of symptomology amongst those staff working with clients who discussed morbid detail, had a higher workload and those who had less experience or were younger (Creamer & Liddle, 2005). As Figley's theoretical concept of STSD relates to knowledge of a traumatic event and not actual exposure to it, the concept could serve as a useful guide in the exploration of crime analysts' experience of working with traumatic material. However, as this concept refers to secondary exposure to a traumatic event, it is possible

that the work of crime analysts sits outside of this arena, in that their exposure to traumatic material can vary from secondary exposure to a traumatic event to analysing data about an offence that an individual could find traumatic in itself, with no direct exposure to a traumatic experience of another person. The wide ranging potential of a crime analysts work encompasses many possibilities of their exposure to material that they may find traumatic, including but not exclusively, secondary exposure.

Those working in caring professions can build up memories of their client's traumatic material and depending on their viewpoint of the world, these memories can affect the carer themselves, and this is referred to as vicarious trauma. Vicarious trauma symptoms can include depression, boredom, cynicism and loss of sympathy and empathy, and a negative change in schemas and a person's view of the world (McCann & Pearlman, 1990). Jenkins and Baird (2002) found therapists working with traumatised victims experienced vicarious trauma from processing the experiences of their clients, and that this could sometimes mistakenly appear as general workplace stress and burnout. Vicarious traumatisation includes negative cognitive schemas and behavioural changes in therapists (McCann & Pearlman, 1990), although there is scant information about the factors that might alleviate vicarious trauma. The construct of vicarious trauma has been frequently used in research focussed on employees working with victims of traumatic experiences such as social workers and therapists (Bell, Kulkarni, & Dalton, 2003; Kadambi & Truscott, 2004; Rothschild & Rand, 2006). Bell et al suggest that vicarious trauma is unique and specific to trauma work and that employees place themselves at risk of vicarious trauma through their contact with traumatised people. They conclude that a wide range of employees (such as police, trauma therapists and emergency workers) can develop vicarious trauma symptoms as a

result of their second hand exposure to traumatic material. It is possible that some CJS staff could experience vicarious trauma as a result of their work. However there is no evidence of general exposure to traumatic material, like reading witness statements, leading to vicarious trauma within this research and as such the concept of vicarious trauma is unlikely to contribute to the exploration of crime analysts experiences of their exposure to material they may find traumatic. Although those exposed to traumatic images may be at risk of vicarious trauma.

Distinct from vicarious trauma, burnout is not specifically related to exposure to traumatised clients and does not encompass the effects of exposure to the trauma of clients as an occupational stressor. Burnout has been described as emotional, physical and mental exhaustion as a result of working with emotionally demanding situations over a long time (Pines & Aronson, 1988). The main construct of burnout is an increasing level of emotional exhaustion (Maslach & Schaufeli, 1993). This could be as a result of working with traumatised clients, but also as a result of many other experiences at work including increased workload, problems with other staff and dissatisfaction with their work (Crabbe, Alexander, Klein, Walker, & Sinclair, 2002). Symptoms can include depression; feeling hopeless; sleep difficulties; callousness; aggression; irritability and cynicism (Schaufeli, et al., 2008). A person can develop cynicism as a coping mechanism, as a type of self-preservation at work (Vuorensyrja & Malkia, 2011). Crabbe et al. (2002) found that the risk of burnout increased as a result of repeated exposure to critical incidents for emergency staff, although not specifically as a result of exposure to traumatic material or information. Those suffering burnout tended to appraise their work negatively, leaving them feeling professionally unfulfilled (Crabbe, et al., 2002). The concept of burnout may overlap with the other concepts for

working with trauma discussed above, although it can stand alone in that it can occur without direct or secondary exposure to traumatic experiences. Therefore it is possible that some CJS staff could be at risk of burnout, but not as a result of their exposure to traumatic material.

These terms provide a variety of explanations for the impact of exposure to traumatic experiences and material of others. There are a number of overlapping symptoms and causes between these terms, yet no term seems to be characterising the effects of exposure to traumatic material such as that experienced by crime analysts in the UK. Regardless of the term used, all of these states can reduce a professional's ability to perform their work and can affect their functioning in daily life beyond their occupational activities (Figley & Kleber, 1995; Stamm, 1995). Staff exposed to the traumatic material of others through their work are clearly at risk of poor psychological well being, including depression and anxiety, poor performance, reduced initiative and creativity, more absenteeism and higher staff turnover (Fink, 2003; Maslach & Leiter, 2008). For example, Perez, Jones, Englert and Sachau (2010) found that US law enforcement staff investigating child pornography reported a negative impact that increased with increasing levels of exposure to 'disturbing media.' Therefore, the contribution of the various concepts of working with traumatic material has an important role in helping to understand the experiences of these employees. Yet none of these concepts appears to provide a useful and specific framework within which to explore the work of crime analysts in this study. In particular, the wide range of exposure experiences which may or may not be termed traumatic material, for example, something as seemingly simple as a piece of bloodstained clothing could be traumatic to

an individual, not as a result of empathising with a victim or imagining what could have happened, but just the image itself at that moment of exposure.

Positive Personal Growth Following Traumatic Exposure

There are well documented studies exploring the negative effects of exposure to trauma and stressful events (Violanti & Gehrke, 2004; Vuorensyrja & Malkia, 2011; Yuan, et al., 2011). However, theories have also emerged exploring the potential for positive consequences from this type of exposure that include benefits and personal growth as a result of this. Arnold, Calhoun, Tedeschi and Cann (2005) introduced the term post traumatic growth referring to the beneficial aspects of exposure to trauma.

Positive psychology has emerged within the literature regarding exposure to trauma, shifting the perspective from purely negative consequences to include the potential for positive effects (Arnold, et al., 2005; Linley & Joseph, 2007; Williams, Ciarrochi, & Deane, 2010). Tedeschi and Calhoun (1995) introduced the term post traumatic growth (PTG) as the benefits gained from the difficulties of exposure to stressful or traumatic events, as opposed to the negative consequences of such exposure. They developed a measure called Post Traumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996), and developed a conceptual model, to rival those of negative effects. Suggesting that this positive growth was the result of a disruption to an individual's assumptive beliefs, rather than the traumatic event itself, that ends up with PTG. Furthermore, they suggested that people could experience both growth and distress at the same time.

Tedeschi and Calhoun (2006) suggest a model of PTG (see Figure 1), they propose that for PTG to be a likely outcome following a stressful/traumatic event, the individual must meaningfully appraise the situation, this may take place some time after

the event. It is likely that this reflection would only be possible when the individual is coping or managing some time after the trauma.

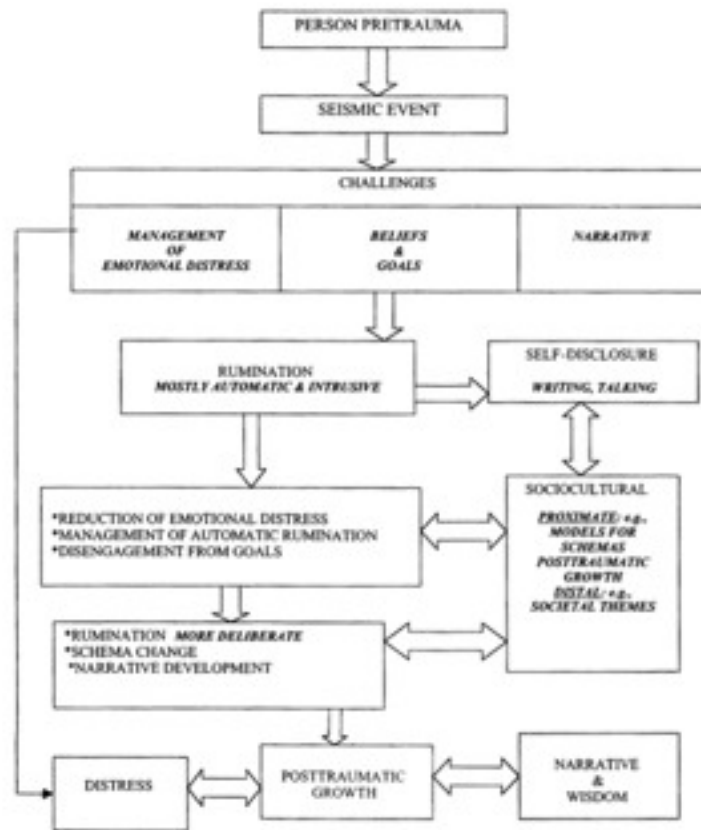


Figure 1.
Model of Post Traumatic Growth (Calhoun & Tedeschi, 2006)

Linley and Joseph (2007) studied well-being amongst therapists exposed to victims' traumatic experiences. They suggested that the amount of post traumatic growth reported by their respondents was linked to both the level of cognitive activity about the event, and their ability to meaningfully appraise their traumatic experience, in order to start cognitively processing the traumatic event and start PTG. Furthermore, Calhoun and Tedeschi (2006) suggested that for an individual to develop PTG, they need to be prepared for exposure to traumatic events that might occur in the future which means that they do not experience such major disruptions after the initial

exposure. They suggested this could indicate an increase in an individual's resilience to future traumatic experiences.

Literature has historically focused upon many areas of influence upon employees' traumatic experiences through their work, particularly those staff working within the emergency services or as carers/helpers (e.g. Ben-Porat & Itzhaky, 2009; Pearlman & Mac Ian, 1995). These have included attitudes, coping strategies, perceptions, emotions, age, gender, environment and social support and culture (for example, Alexander & Klein, 2001; Calhoun & Tedeschi, 2006; Cheung & Boutte-Queen, 2000; Collins & Gibbs, 2003). Calhoun & Tedeschi (2006) explore various areas of influence upon individuals within their model of PTG, including spiritual change, positive activities, the individuals' environment and social support. It is the goal of this research to explore experiences of crime analysts working with traumatic material of others. Following previous unpublished research (Lavis, 2011) with UK crime analysts, respondents identified three areas as being influential upon them when working with traumatic material and these were: social support; working environment and undertaking positive activities. These reflected those identified by Calhoun & Tedeschi and studies that included front line staff (Colwell, 2005; Iwasaki, Mannell, Smale, & Butcher, 2005), although spirituality did not emerge as being influential in this study. Therefore further exploration of these particular areas of influence is discussed below.

Social Support as an Area of Influence Following Traumatic Experiences

Research suggests that individuals who feel able to confidentially share their feelings with others show a greater resilience to enable better processing of traumatic experiences (Calhoun & Tedeschi, 2006), suggesting that social support can be

implicated in the development of PTG. Tedeschi and Calhoun (2004) proposed that perceived social support has also been linked with stress-related growth.

Saegert, Thompson and Warren (2001) claimed that higher levels of social support at times of difficulty could provide individuals with higher levels of resilience. Research suggests that those respondents that have the ability to talk about their experiences to others, safely and in confidence, are more likely to be resilient, and that good social support can contribute to developing resilience in dealing with difficult situations. This support allows the processing of the traumatic experience, allowing a better comprehension of what was involved for the individual (Lepore, 2001).

Conversely, the ‘wrong’ sort of social support can be counterproductive (Revenson, Schiaffino, Majerovitz, & Gibofsky, 1991) and the presumption that any social support is better than not having any is misplaced (Lanza, Cameron, & Tracey, 1995). Revenson et al., found that problematic support was related to an increased source of stress and even depression, and that when considering the potential to reduce stress through social network interactions, it is essential to jointly consider positive and negative aspects of support interactions at the same time. Lanza et al., identified the most and least helpful social support came from spouses and professionals in the form of emotional support. In this study, the type of support was coded as emotional; tangible; informational and critical remarks. They concluded that individuals may need certain types of support from specific providers and if their needs remain unfulfilled they may perceive this support as unhelpful. This would tend to suggest that the ability to identify, understand and communicate ones needs is essential for the process of appropriate support to take place. Individuals respond to traumatic events in a wide variety of ways, and offering people unnecessary assistance or encouraging individuals

to dwell on traumatic events, questioning their reactions can be more harmful than helpful (Lepore, Fernandez-Berrocal, Ragan, & Ramos, 2004; Revenson, et al., 1991).

The Environment as an Area of Influence Following Traumatic Experiences

Calhoun and Tedeschi (2006) considered that the environment of an individual exposed to trauma could promote resilience. They suggest that rather than placing the onus on the individual to learn to become more resilient, this responsibility should belong with the environment of the individual, including settings and situations.

Wortman (2004) research findings share the potential benefits of this shift in focus from the individuals to their environment, suggesting this change prevents blaming people who are victims of traumatic experiences for being unable to adapt to them. However, Wortman also issues a caveat about oversimplifying psychological growth following traumatic experiences, hoping that the conception of the PTG model would not leave those experiencing such exposure feeling inadequate or shameful should they be unable to experience positive growth out of it.

As research often identifies risk factors in a bid to remove them, it has been suggested that improving an individual's resources, such as the social environment together with coping skills, is equally important as the removal of risk factors (Lepore, 2001; Revenson, et al., 1991).

Positive Activities as an Area of Influence Following Traumatic Experiences

Besides appropriate social support, good coping skills and positive environments, literature has also suggested that engaging in positive activities can influence individuals, enabling them to stop thinking about their stressors (Lepore, et al., 2004). Lepore (2001) identified that on occasions it could be helpful not to

encourage individuals to be ruminating and continually thinking about traumatic events and that uplifting activities could be more helpful

Summary

Background literature has recognised the importance of individual's experiences following exposure to traumatic experiences and has acknowledged this can affect a variety of professionals. The study shares the same goals as this research, in identifying a range of personal and work related experiences following exposure to other peoples' traumatic material in crime analysts employed with the UK criminal justice system. It would be beneficial to both employers and employees to explore which experiences are likely to represent sources that both exacerbate, and are protective to them, in their work. Further understanding may contribute to a better understanding of whether this work is a source of stress or not to crime analysts and whether intervention is necessary. If it were identified as such, this study would increase awareness to enable the development of appropriate interventions that could reduce any harmful effects of their exposure to this material. Even fifty years ago it was recognised that stress can be both positive and negative for those experiencing it; '*Stress is not even necessarily bad for you. It is also the spice of life. For any emotion, any activity, causes stress*' (Selye, 1956 p. xv).

Justification of Thesis

The objective of the current thesis is to explore how crime analysts experience working with other people's traumatic material. Literature has identified both psychological growth and negative impacts upon staff in a variety of professions exposed to traumatic material, this has been discussed earlier in the introduction. However, research in this area needs to pay particular attention to non front line staff

employed within the criminal justice system. There does not appear to be any published research exploring the responses of exposure to traumatic material amongst crime analysts. The systematic review conducted as part of this thesis aims to consolidate what is currently known about the effects of working with traumatic material upon CJS staff. By improving our understanding of what factors are protective to crime analysts exposed to traumatic materials, more can be done to minimise potential levels of difficulty amongst them, helping to reduce negative impacts and raise opportunities for psychological growth. Furthermore, increased understanding of exacerbating factors will be helpful in developing appropriate and effective intervention strategies. It is proposed that this thesis will add to the literature in this area.

Due to the heterogeneity of research styles, comparing current literature regarding staff working with traumatic material presents particular difficulties. Studies have used a wide range of approaches and measures. This has been further exacerbated by empirical literature generally not reflecting the issues concerning the emotional and personal qualities of employees' experiences of working with traumatic material. The use of qualitative studies is clearly needed to develop an insight into individuals' subjective experiences of working with traumatic material. The empirical research study described in Chapter IV of this thesis aims to add to the literature in this way.

Overview

This introductory chapter outlines the literature relating to exposure to traumatic experiences and how people respond differently. In particular, this exposure through an individual's work is discussed. Both positive personal growth and negative impacts of such exposure is discussed in connection with professionals and crime analysts in particular.

Chapter 2 is a systematic literature review, which explores the literature related to the psychological effects of working with traumatic material upon non front line employees working within the criminal justice system. It is suggested that the findings from this review may aid understanding that these employees experience both negative and positive effects of working with the traumatic experiences of others. Current studies are so varied; further research is required specifically with staff exposed to such material. Moreover, identifying the components that link these effects could contribute towards developing ways of understanding and mitigating negative effects and the enhancement of opportunities for personal growth.

Chapter 3 explores the psychometric properties of a depression and anxiety measure called the Hospital Anxiety and Depression Scale (HADS), which is considered useful in assessing anxiety and depression in a number of settings. The reliability and validity of the assessment tool is discussed together with the limitation of using this scale in practical settings and research. Despite the heterogeneity of the current literature, (e.g., using a wide variety of assessment methods and measures), this critique identified that the HADS would not be a helpful measure to contribute towards reducing this gap. Subsequently, it was not found to have adequate psychometric properties to be used in the empirical study described in Chapter 4.

Chapter 4 is a qualitative empirical research study that explores the work of crime analysts employed by the CJS who are exposed to the traumatic material of others in their work. Particular attention is given to factors that may exacerbate or be protective to their experiences of this exposure. The overall aim of the research was to reduce the research-practice gap by providing a study that could be recognised for its practical application, and contribute to the understanding of the experiences of analysts at work.

Chapter 5 links all the findings together along with previous literature. Theoretical and practical implications are discussed, with reference to theories of personal growth, organisational influences and secondary traumatic stress. The overall findings are discussed in relation to practical utility for professionals and future research. The limitations of the thesis are explored.

CHAPTER II - SYSTEMATIC REVIEW

What does research suggest is
the psychological effect of
working with traumatic material upon
non front line staff employed within criminal justice systems:

A systematic literature review

Abstract

Aims: To systematically review the research base that explores psychological effects of working with traumatic material, upon non front line staff employed within criminal justice systems. Specifically, the main objectives of the review were to examine both positive and negative effects, as a result of their work.

Method: A search of electronic bibliographic databases was conducted using a systematic search strategy. Identified studies were subject to predefined inclusion/exclusion criteria and quality assessment. Data from included studies were extracted and synthesised using a qualitative approach.

Results: Nine studies met the inclusion criteria and were included in the review. Results suggested there was a wide range of study designs, hypotheses, measures and sample types within the studies, each having unique objectives. However, eight studies identified evidence of psychological effects, including vicarious trauma, secondary traumatic stress and positive growth, upon their participants as a result of their exposure to traumatic material. The main categories of the findings were discussed. None of the studies assessed professionals exclusively working with traumatic material; they were mainly client facing professions.

Conclusions: The findings confirm that non front line CJS staff do experience psychological effects as a result of working with traumatic material/experiences of others. Although a number of themes were found to be associated with these effects, the ability to draw meaningful conclusions was restricted by the heterogeneous nature of the studies and a number of methodological limitations. Implications for practice and areas of future research are proposed.

Background

Introduction

The current review will examine the literature around psychological effects resulting from exposure to traumatic material, as a result of an individuals' work within the criminal justice system. In particular, this review will focus upon the impact on non front line staff.

Overview

The effects of working with traumatic material has been of academic interest for many years, with the majority of studies traditionally focusing on emergency, front line staff working within criminal justice systems (CJS) around the world (e.g. Blau, 1994; Sterud, Hem, Ekeberg, & Lau, 2007). These operational front line employees often visit sites of crimes and can be personally and directly involved in criminal and/or emergency events.

There are many studies looking into the particular kinds of traumatic events these front line staff, such as police officers and scenes of crime officers, are exposed to and the psychological effects of this exposure (e.g. Burke & Paton, 2006; Miller, 1995). Research has also addressed the broader sources of stress deriving from police officers' experiences within their work (e.g. Anshel, 2000; Brown, Fielding, & Grover, 1999; Collins & Gibbs, 2003). Arguing the need to not only provide solutions to the issues arising from the impact of traumatic exposure, but also to improve welfare and training in relation to police officer personnel, research has highlighted the development of personal growth within some officers (e.g. Stephens & Long, 2000; Storch & Panzarella, 1996; Williams, et al., 2010). There is clearly a requirement for research-based psychological advice to assist in the training and support of police officers, and

research already provides a large contribution to this need (e.g. Anshel, 2000; Arendt & Elkit, 2001; Krause, 2009; Tanigoshi, Konton, & Remley, 2008; Violanti, 1992).

However, within the last decade, increased academic attention has been given to the realm of occupations that involve exposure to traumatic material, including CJS staff that do not undertake a front line role, such as crime analysts, transcribers, solicitors, probation staff and judges (Creamer & Liddle, 2005; Deighton, et al., 2007). When considering some of the CJS employees that may share non front line exposure to traumatic material with police officers, for example Bell (2003) and Coles and Mudaly (2010), and see: <http://www.soca.gov.uk/about-soca/serious-crime-analysis-section>, it is likely these individuals are also facing similar risks to their psychological wellbeing. As discussed earlier, there is a developing literature regarding those occupations that involve exposure to traumatic material.

Crime analysts, along with other CJS colleagues, provide additional services dealing with the crimes, emergencies and incidents that have been faced by frontline police. They will be working with, and exposed to, traumatic material concerning criminal justice issues. These employees are likely to face a plethora of work experiences that are unique to the role they fulfil, both positive and negative in nature, just as those with front line, first hand exposure to traumatic material are. Often this work is repeated over weeks, months and years, as it is the very essence of the position they are employed for. It could be predicted therefore, that some CJS staff might also experience psychological effects as a result of their exposure to traumatic material within their specific professional roles. For example, secondary traumatic stress and burnout were identified amongst police officers who were repeatedly exposed to disturbing media images working within the field of computer forensics investigating

internet child pornography (Perez, et al., 2010). There will be staff within the CJS who are also exposed to this material, for example staff dealing with preparation of this material for court and court staff (e.g. Bright & Goodman-Delahunty, 2006; Deighton, et al., 2007).

Researchers have attempted to explore professional's exposure to traumatic material, and have described a range of psychological effects from negative to positive, and both together (e.g. Arnold, et al., 2005). For example some studies have produced frameworks to capture and describe negative work related psychological effects including: burnout (Pines & Aronson, 1988), secondary traumatic stress disorder and vicarious trauma (Figley, 1995). Researchers have proposed a range of positive effects of such exposure, attempting to identify the attributes of individuals who are more able to cope than others when they have been exposed to traumatic information (White, Driver, & Warren, 2008) and the concept of Post Traumatic Growth (Calhoun & Tedeschi, 2006). The development of resilience as a result of such exposure at work has also attracted academic attention, for example, Richardson (2002) claims characteristics of resilience refer to how someone responds adaptively after exposure to a traumatic event. Therefore people with this ability are more likely than those without it to positively adapt to exposure to a traumatic event. This provides a positive psychology framework for applying to the experience of exposure to traumatic events that identifies qualities that help individuals thrive (Snyder, Lehman, Kluck, & Monsson, 2006).

Given the potential for individuals to experience psychological effects as a result of their exposure to traumatic material at work, it is evident that a greater understanding of these effects is important. The first step in achieving this is to further our understanding of the nature of these effects and the factors that contribute to their occurrence.

The current review

An initial search of the Cochrane Library (all years, completed on 25th April 2010) was conducted to investigate whether there were any existing reviews on the psychological effects of exposure to traumatic material amongst CJS staff. No existing systematic reviews were found. It was therefore felt that an up-to-date review of such exposure to traumatic material research in non front line CJS staff, following a systematic approach, would be a useful addition to the growing literature base in this area.

Aims and objectives

The aim of the current review was to systematically explore the psychological effects of working with traumatic material on non front line staff within the CJS. Specifically, the main objective of the review was to explore psychological effects, both negative and positive, resulting from exposure to traumatic material amongst non front line employees of criminal justice systems.

Method

Sources of literature

Databases.

A search of the following electronic bibliographic databases was conducted in order to identify potential publications for the current review. Electronic searches of PsychINFO (Psychological Abstracts), Embase (Ovid), Medline (R) (OVID), Westlaw UK, The Cochrane Library, Campbell Collaboration.

Reference lists.

Searches of bibliographies of key articles.

Personal communication.

Personal contact was made with field experts Scott A. Johnson, Lori Colwell and Laurence Miller who shared the results of their research in this field.

Search strategy:

The Cochrane and Campbell Collaboration systematic review databases were searched initially to identify whether there were any existing reviews of a similar nature to this review. None were identified. A comprehensive search strategy for relevant articles was then employed to identify all primary studies.

Four electronic databases were searched including: PsychINFO (1996-2012), EMBASE (Ovid) (1996-2012), Medline (R) (Ovid) (1996-2012) and Westlaw. These databases allowed specific limits to be placed on search criteria. All databases were accessed twice, first on 28/4/10 and second to update on 22/6/12, and all search criteria were the same. Key words were chosen by the author and academic supervisor by producing keywords for potential experience outcomes of working with traumatic material, and professions that may be working within the CJS (both US and UK terms). The use of the wild card character * was also implemented to enable the widest selection of search terms. Electronic searching consisted of searching the title, abstract and key words using the following key words:

(Post traumatic stress disorder or PTSD or trauma* or stress* or mental health or mental illness or psychological health or psychological distress or anxi* or depress* or burnout or compassion fatigue or vicarious trauma* or secondary trauma* or coping or anger* or symptom* or emotion* or alcohol* or mental* or exhaust* or cynicism or panic).m_titl.

AND

(Police* or probation* or investigator or law enforce* or judge* or attorn* or lawyer* or solicitor* or barrister* or juries* or juror* or jury* or analyst* or therapist* or court*

or magistrate* or crown prosecution service or prosecutor* or advocate or psychologist* or psychotherapist* or psychiatrist* or (prison and (guard or officer or warden)) or Youth Offending* or YOT or secure hospital* or secure unit).m_titl.

Study Selection

Criteria.

The following criteria were explicitly applied to a variety of studies to assess study eligibility for the present systematic review and to reduce potential reviewer bias. Every paper had a thorough second screening to decide whether it should be included in the review or not. There was not, however, a second rater available and therefore inter rater reliability (Kappa) checks were not used. Full text was obtained for all studies that met the criteria. Decisions about the inclusion and exclusion criteria were determined through previous experience of the academic supervisor and the author and the aims of the study to capture as many studies of interest as possible. Overall the aim was to produce criteria that were clear enough to avoid the selection of studies that could reflect a favoured conclusion and were straightforward to replicate in future studies, as recommended by the Cochrane Library (2011).

Inclusion criteria.

- Study populations must be professionals employed within criminal justice systems.
- No age limits to the population.
- Must examine outcomes that discussed or included the psychological effects of working with traumatic material
- Has vicarious trauma and/or resiliency been measured?
- Years of publication 1996-2012. This included studies published up to the date of the review, no forwards search was included in this study.

- English language papers or translated into English
- Study design needed to be outlined and clearly stated.

Exclusion criteria.

- Systematic or literature reviews, editorials or commentaries, unpublished doctoral dissertations
- Studies before 1996
- Studies that focus on staff that are directly exposed to front line policing, police officers, scenes of crime officers (because their first hand exposure to live, confrontational and dangerous incidents cannot be separated from their exposure to other people's trauma).

Language.

No restriction was imposed. However, foreign language articles must have been translated into English language.

Types of participants.

Any adults, male or female that worked within criminal justice systems and had exposure to traumatic material through their work.

Data Collection

The search strategy generated 5,786 citations from electronic databases and a further 5 studies were identified from hand searching the reference lists of papers that had been selected with the minimum threshold criteria, see Table 1. From those identified within the references, one met the criteria itself which was Steed & Downing (1998) from Ben-Porat et al (2009). There were 141 duplicate references, which were removed from the review. Of the remaining studies, 5636 failed to meet the inclusion criteria. This left 9 publications for inclusion and data extraction.

Table 1
Search results

Source	Initial number	Papers not meeting inclusion criteria	Duplicates excluded	Final number included in review
PsycINFO	2532	2475		
Embase	2304	2220		
Medline	821	815		
Westlaw UK	124	122		
Reference lists of papers meeting criteria	5	4		
Total:	5786	5636	141	9

Quality of included studies

The methodologies of the studies included in this review were assessed for quality. A scoring system for quality assessment, such as Critical Appraisal Skills Programme (CASP, 2004), was not used in this review due to the wide range of methods employed across differing populations, settings and measures, together with the debatable value of applying quality assessment methods to qualitative research and what the outcomes of such an appraisal should be (e.g. Mays & Pope, 2000; Popay, Rogers, & Williams, 1998). Kmet, Lee and Cook (2002) provide quality assessment criteria for evaluating primary research papers from a variety of fields which includes checklists that are independently applied by different reviewers and combined to produce inter rater agreement between results. Due to time constraints and the availability of only one reviewer these criteria were not applied to this study. Should future studies have the resources that can allow for inter rater agreement to be assessed, this would be a useful application for similar studies. However there is a need to assess strengths and weaknesses within studies, both qualitative and quantitatively and these

were identified on the Data Extraction form (Appendix A) to assist with the identification of any bias and with the critique of included studies within the current review.

Data Extraction and Synthesis

Relevant data from each study that met the quality criteria was extracted and recorded using a specifically designed extraction form (Appendix A). This form allowed the author to record information on each study's design, aims, method of recruitment, population studied, inclusion criteria, methodology, results and analysis.

Results

Included studies

All the included studies met the minimum threshold criteria. All 9 articles were given an identification number, see Table 2.

Table 2
Studies and ID numbers

Study ID	Title of study	Authors	Year of publication	Country of study
1	Implications of Treating Family Violence for the Therapist: Secondary Traumatization, Vicarious Traumatization and Growth	Anat BEN-PORAT, Hay ITZHAKY	2009	Israel
2	Juror Reactions to Jury Duty: Perceptions of the System and Potential Stressors	Brian H. BORNSTEIN, Monica K. MILLER, Robert J. NEMETH, Sarah MUSIL	2005	USA
3	Evidence of Secondary Traumatic Stress, Safety Concerns, and Burnout Among a Homogeneous Group of Judges in a Single Jurisdiction	Jared CHAMBERLAIN, Monica K. MILLER	2009	USA
4	Emotional Responses to child sexual abuse: A comparison between Police and Social Workers in Hong Kong	Monit CHEUNG, Needha McNeil BOUTTE-QUEEN	2000	Hong Kong
5	Predicting Psychological Distress in Sex Offender Therapists	Liam ENNIS, Sharon HORNE	2003	USA and Canada
6	Preventing Vicarious Traumatization of Mental Health Therapists: Identifying Protective Practices	Richard L. HARRISON, Marvin J. WESTWOOD	2009	Canada

Study ID	Title of study	Authors	Year of publication	Country of study
7	Vicarious Trauma among therapists working with Sexual Violence, Cancer and General Practice	Michael A. KADAMBI, Derek TRUSCOTT	2004	Canada
8	A Phenomenological Study of Vicarious Traumatization Amongst Psychologists and Professional Counsellors Working in the Field of Sexual Abuse/Assault	Lyndall G. STEED, Robyn DOWNING	1998	Australia
9	Vicarious Trauma: The impact on Solicitors of Exposure to Traumatic Material	Lila Petar VRKLEVSKI, John FRANKLIN	2008	Australia

Characteristics of included studies.

Table 3 summarises the characteristics and principal findings of the 9 studies included in the review.

Table 3
Summary of studies

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
1	<p>1. To deal with positive & negative implications of working with victims of family violence on therapists in terms of secondary traumatization, vicarious traumatization and growth</p> <p>2. To examine the positive & negative changes that therapists experienced in their lives and families as a result of their work</p>	Social workers <i>n</i> =214	<p>Quantitative:</p> <ul style="list-style-type: none"> ✓ Secondary Traumatic Stress Scale (Bride, et al., 2003) ✓ Post-Traumatic Growth Inventory (Tedeschie & Calhoun 1996) <p>Qualitative:</p> <ul style="list-style-type: none"> ✓ Open questions <p>2 groups:</p> <p>A: working in field of family violence (<i>n</i>=143)</p> <p>B: not working in field of family violence (<i>n</i>=71).</p>	<p>No significant differences between groups in levels of secondary trauma.</p> <p>Differences were found for growth and levels of positive and negative changes that participants experience in themselves, their lives and their families.</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
2	<p>Study had 5 research questions:</p> <ol style="list-style-type: none"> 1. How do Jurors Perceive the Court System 2. Is involvement in the Justice System a source of stress for jurors? If so what are the major causes of stress? 3. What is the time course of stress? 4. Does stress vary as a function of jurors? 5. Does post-trial intervention, or debriefing mitigate the negative effects of jury duty? 	<p>Jurors <i>n</i>=159</p>	<p>Quantitative:</p> <p>Participants were given postal survey pack to complete which consisted of:</p> <ul style="list-style-type: none"> ✓ Centre for Epidemiological Studies Depression Scale ✓ State-Trait Anxiety Inventory ✓ Demographics <p>Qualitative:</p> <ul style="list-style-type: none"> ✓ Telephone survey follow up 	<p>Jurors in sample did not experience great deal of stress, although 40% reported at least some.</p> <p>Greatest amount of stress reported to be from decision making, trial complexity and jurors' daily routine. Authors claim trial type (civil/criminal) had minimal effect on stress measures.</p> <p>Women jurors reported significantly more stress than men on several factors</p> <p>Little support for changes in levels of stress or depression as result of debriefing. Participants perceived debriefing as helpful.</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
3	<p>Aim of study:</p> <p>To draw attention to three classes of occupational experiences that judges face</p> <ul style="list-style-type: none"> • Secondary traumatic stress (STS) • Safety concerns • Work related burnout <p>and to present recommendations to alleviate them.</p>	<p>Judges</p> <p>$n=9$</p>	<p>Qualitative study:</p> <p>Examination of anecdotal evidence and case study interviews.</p> <p>The questions were designed to be broad. Answers analysed for content that would suggest evidence of three classes of experiences and 'the coding scheme was based on the researchers expertise and understanding of the aforementioned ideas'</p>	<p>Researchers identified 54 responses which were equally divided between the participants.</p> <p>Researchers agreed that 87% of the messages were properly categorised as indicators of STS, burnout or safety concerns and 'the results generally indicated that the judges were at risk of experiencing stress from these three sources.'</p> <p>13 messages were identified as potential indicators of STS. Themes emerged including that sitting in court can be an emotional setting. Judges described the anxiety and trauma that is experienced by plaintiffs or defendants. One respondent mentioned various types of trauma that judges experience vicariously including death; paraplegia; burning and infant trauma.</p> <p>Authors conclude analyses indicates judges may be at risk for STS given the nature of their work environment. Suggest that judges should be trained to recognise the effects of the occupational stressors in the assessment.</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
4	<p>This study examined the initial responses to CSA of police and social workers in Hong Kong.</p> <p>Hypothesis: Emotional responses are significantly different between police and social workers.</p> <p>Research on specific emotional responses of professionals to child sexual abuse (CSA).</p>	<p>Social workers and Police Officers</p> <p><i>n</i>=114</p>	<p>Quantitative study:</p> <p>Data gathered at training sessions on CSA in Hong Kong.</p> <p>Self-report surveys were completed. The quantitative scale was purpose designed for the study.</p> <p>Based on their recall of the first child sexual abuse incident, <i>n</i>=28 police officers and <i>n</i>=86 social workers from 10 training sessions on CSA in Hong Kong indicated how strongly they felt about their emotions.</p> <p>There were 37 variables based on emotional responses to CSA based on a training curriculum developed by American Association for Protecting Children.</p>	<p>Among the 37 emotional responses: Authors found that the two groups were not significantly different in most of the responses; that police were more likely to have ambivalent and revenge feelings while social workers were more likely to have discomfort feelings.</p> <p>There were significant differences between police and social workers in the responses:</p> <ol style="list-style-type: none"> 1. Embarrassment with the perpetrator 2. Ambivalence about rescuing the child or preserving the family 3. Fear of being inadequate in handling the situation 4. Titillation in response to our involuntary physiological responses to words and descriptions of sex acts 5. Feelings of revenge because the behavior was bad or immoral 6. Empathy with the child's condition 7. Ambivalence about helping or punishing the perpetrator. <p>In both groups, "anger at the perpetrator" and "empathy with the child's condition" were the most strongly felt emotions.</p> <p>Recommend that future research needed on emotional responses to professionals working with child abuse victims.</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
5	<p>To provide an exploratory investigation of the effects of exposure to traumatic material on therapists who work with sex offenders.</p> <p>Two research questions:</p> <p>Do self-reported symptoms of post traumatic stress increase with the amount of time clinicians devote to practice with sex offenders?</p> <p>Does perceived support from family and peers, and participation in professional supervision diminish the risk of psychological distress?</p>	<p>Sex Offender Therapists</p> <p><i>n</i>=59</p>	<p>Quantitative study:</p> <p>Method was a postal survey.</p> <p>Assessment One:</p> <p>The Los Angeles Symptom Checklist (LASC) King, King, Leskin and Foy (1995)</p> <p>Assessment Two:</p> <p>Clinician Survey. Developed for purpose of this study.</p> <p>Two groups: Group 1 were survivors of trauma/abuse, Group 2 randomly selected participants who reported no trauma/abuse from the remaining population. Compared both groups for differences</p> <p>4 independent variables, sex offender contact hours; peer support, family support; supervision hours, were identified for linear regression analysis.</p>	<p>Independent t-tests failed to indicate significant differences of psychological distress between two groups either on general psychological distress or PTSD symptom-specific scales of LASC.</p> <p>Researchers included ALL participants in analyses regardless of personal trauma history. No gender differences were found. Pearson product-moment procedures failed to identify significant relationships between the number of hours spent working with sex offenders and measure of psychological distress.</p> <p>Overall participants reported low levels of general psychological distress ($M=17.24$, $SD=13.90$) and PTSD symptomatology ($M=9.07$, $DS = 7.56$).</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
6	<p>To explore individual and organisational practices that contribute to the professional satisfaction and wellbeing of experienced clinicians who work with traumatised clients and to the sustainability of their efforts in the workplace.</p> <p>The purpose of the investigation was to gain and share knowledge about these protective practices and ultimately contribute to the prevention of vicarious trauma.</p>	<p>Mental health therapists</p> <p><i>n</i>=6</p>	<p>Qualitative study:</p> <p>(Quantitative method for identifying sample)</p> <p>Sampling procedure to recruit peer and organisationally nominated therapists who met with their inclusion criteria (masters or doctoral level), minimum 10 years experience with traumatised clients, self identified as having managed well in this work.</p> <p>Recruitment by way of flyers through professional networks.</p> <p>Completed Professional Quality of Life: Compassion Fatigue and Satisfaction Sub-scales, R-III (Pro-QOL) (Stamm 2003) Those who scored below average on the burn out and compassion Fatigue sub-scales of the Pro-QOL were invited to participate in study.</p> <p>Collection of narrative data through in depth interviews.</p> <p>Phase 1: initial structured interview</p> <p>Phase 2: open-ended individual interviews.</p> <p>Phase 3: third interview as a follow-up/member check to incorporate any requested revisions.</p> <p>Categorical content analysis was conducted across participants' narratives.</p> <p>9 major convergent themes emerged.</p> <p>Final validity check was done by sending final themes to participants to endorse the accuracy of the cross narrative themes.</p>	<p>Research findings describe how 'these exemplary clinicians engage in protective practices that mitigate the risks of VT.'</p> <p>9 major themes were identified:</p> <ol style="list-style-type: none"> 1. Countering isolation (in professional, personal and spiritual realms) 2. Developing mindful self-awareness 3. Consciously expanding perspective to embrace complexity 4. Active optimism 5. Holistic self care 6. Maintaining clear boundaries and honouring limits 7. Exquisite empathy 8. Professional satisfaction 9. Creating meaning <p>Study yielded 'novel' finding that empathic engagement can be a protective practice for clinicians who work with traumatised clients.</p> <p>Authors suggest this challenges prior assumptions about the causality and inevitability of VT.</p> <p>Participants who engaged in what authors describe as 'exquisite empathy' described have been invigorated rather than depleted by their intimate professional connections with traumatised clients.</p> <p>Authors indicate that previously therapist empathy for traumatised clients had consistently been depicted as a key risk factor for VT. They claim this study challenges prior conceptualisations of VT and points to 'exciting new directions for research and theory as well as applications for practice.'</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
7	<p>To investigate vicarious trauma and traumatic stress symptoms among professional groups working with client populations that theoretically posed different levels of risk in producing vicarious trauma.</p> <p>Hypothesis:</p> <p>If vicarious trauma was present, significant differences would be found between groups on measures of trauma related distress when confounding variables (e.g. personal trauma history) were controlled.</p> <p>Specifically it was predicted that due to the presence of vicarious trauma, participants working with trauma clients would exhibit significantly higher levels of traumatic stress compared to participants working with a variety of client issues.</p>	<p>Sex offender therapists</p> <p>$n=221$</p>	<p>Quantitative Design: Postal Survey</p> <p>Three groups of participants providing counselling services to different populations were surveyed to assess their levels of vicarious trauma, traumatic stress and burnout. Surveys were anonymous.</p> <p>2 groups worked with client populations who experienced a 'traumatic stressor.'</p> <p>Final group provided services primarily to a range of clients/issues and were not working primarily with clients who experienced traumatic stressors and this group was used as comparison group.</p> <p>Measures:</p> <ul style="list-style-type: none"> Participant Questionnaire –developed by the researchers to collect demographic information Traumatic Stress Institute Belief Scale (TSI) Revision M (Pearlman, 1996) The Impact of Event Scale (IES), Horowitz, Wilner & Alvarez 1980, The Maslach Burnout Inventory-Human Services Survey (MBI, Maslach, Jackson & Leiter 1996) <p>MANCOVA used to tested whether significant differences between groups on TSI and IES.</p>	<p>625 participants were surveyed across three groups – 251 completed survey resulting in 40% response rate. Thirty surveys did not meet screening criteria leaving final sample of 221.</p> <p>Compared participants with samples in previous research (not stated what) and normative data were calculated.</p> <p>Correlational analysis revealed that personal trauma history was not significantly related.</p> <p>The Traumatic Stress Belief Scale and Maslach Burnout Inventory were found to be highly correlated which they thought indicated a psychometric overlap.</p> <p>Authors concluded that this sample did not provide enough evidence to support vicarious trauma as an occupational hazard to therapists working with trauma survivors.</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
8	<p>Aim: To determine the extent to which therapists reported effects of vicarious trauma, the impact of these effects and the coping strategies used to deal with them.</p> <p>Study designed to investigate the VT effects experienced by therapists who work with sexual abuse/assault survivors.</p>	<p>Counsellor & psychologist</p> <p><i>n</i>=12</p>	<p>Qualitative Study:</p> <p>Semi structured interview developed specifically for study.</p> <p>Interview including general questions about experience of hearing traumatic material then more specific focussing on cognitive schemata and coping strategies.</p> <p>Interviews lasted approx. 1 hour and were recorded, transcribed and thematic content analysis was conducted independently by two raters and salient issues were identified.</p> <p>Authors claim high inter rater reliability was achieved.</p>	<p>Therapists' responses to hearing traumatic material were predominantly affective and included anger, pain, frustration, sadness, shock, horror and distress.</p> <p>Several therapists reported self protective responses in which they actively sought not to imagine the clients' experience.</p> <p>Participants stressed need for education and training in both management of sexual abuse/assault clients and the effects of VT. They argued that the former is vital to their feelings of competence and helps to mitigate against crises of confidence.</p> <p>Knowledge of the potential effects of VT was considered essential in that it provided validation of the therapist's experience and encouragement to take preventive measures.</p> <p>Findings indicated that the participants experience a variety of severe negative effects which may have a pervasive affect on their functioning in both personal and professional domains.</p> <p>The need to educate therapists about the potential effect of VT and possible coping and preventive strategies is highlighted.</p> <p>Authors concluded that interviews revealed that all therapists experienced negative effects of working with severely traumatised clients in accordance with McCann & Pearlman (1990) who argue that VT is an unavoidable result of trauma counselling.</p>

ID	Hypothesis/Aim	Sample	Measurement/Design	Results
9	<p>Aim: To investigate:</p> <ul style="list-style-type: none"> The impact of working with traumatised clients Their traumatic material on members of the legal profession. <p>Hypotheses:</p> <ol style="list-style-type: none"> Criminal lawyers would report higher scores on measures of symptomatic distress and disruptions to cognitive schemas A greater number of criminal law solicitors would report using professional assistance to cope with work related distress Personal trauma history would be associated with higher levels of vicarious trauma Criminal law solicitors would report less satisfaction with their work 	Lawyers <i>n</i> =100	<p>Quantitative study:</p> <p>The study compared solicitors (<i>n</i>=50) working with traumatised clients (criminal defence lawyers and prosecutors) with solicitors (<i>n</i>=50) working with non traumatised clients (conveyancers and academics).</p> <p>Postal survey:</p> <p>Completion of research pack containing questionnaires:</p> <ul style="list-style-type: none"> Demographic questionnaire Vicarious Trauma Scale (VTS) Satisfaction With Work Scale (SWWS) Depression, Anxiety and Stress Scales (DASS) Lovibond & Lovibond, 1995) Impact of Event Scale-revised (IES-R) Weiss & Marmar 1997 Trauma and Attachment Belief Scale (TABS) Pearlman 2003. <p>Return of completed questionnaires signified informed consent.</p> <p>Statistical analysis to compare three variables between the two groups:</p> <p>VT effects; coping strategies and satisfaction with work.</p> <p>2x3 analysis of variance to determine the effects of trauma history. Significance level of .025 used (rather than .05).</p>	<p>Criminal lawyers reported significantly higher levels of subjective distress and vicarious trauma, depression, stress and cognitive changes in relation to self-safety, other safety and other intimacy.</p> <p>No significant differences were found between the two groups on measures of satisfaction with work or coping strategies in relation to work related distress.</p> <p>Multiple trauma history was associated with higher scores on measures of symptomatic distress. Significant differences ($p<.025$) between two groups in vicarious trauma effects as measure by total score on VTS, DASS and TABS.</p> <p>The two groups did not differ significantly on avoidance, intrusions and hyper arousal as measured by the IES-R.</p> <p>Significant differences found between the two groups on each individual item on the VTS ($p<.025$) except for one item.</p> <p>Coping strategies – no differences other than on peer support ($p<.025$) between the two groups, with criminal lawyers more likely to seek peer support. Approx. two-thirds of overall sample using alcohol and one-third using medication to cope with distress arising from work – same across both groups. Additional strategies listed included eating, religion and family support. In only two variables (depression and self safety) did inclusion of trauma history reduce the effect of a previously significant effect of group to non significance.</p> <p>Participants in both groups with a multiple trauma history displayed greater vicarious trauma effect.</p> <p>No significant differences between two groups in terms of overall satisfaction with work</p>

Limitations of studies

Study 1 - (Ben-Porat & Itzhaky, 2009)

Authors claim the study was based on experiences of social workers, however 31.5% of the study population were not practicing social workers. This was a significant number within the sample to influence the outcome of the result. Working as a manager could indicate different variables influencing secondary traumatisation, vicarious traumatisation and personal growth within those individuals. Authors conducted Chi-square tests between personal and professional characteristics and found no significant differences, yet throughout the study refer to their sample as social workers only which they were not.

Study 2 - (Bornstein, Miller, Nemeth, Page, & Musil, 2005)

Juries in the United States will differ from those in the UK and elsewhere for a range of reasons, including the way they are selected, the use of the death penalty and, in some states, confidentiality post trial. This study was produced in a reasonably wide context, it would have been interesting to obtain more information about the volume of ‘shocking material’ these jurors were exposed to as the majority of the trials cited were civil trials and unlikely to contain such material. In which case it is unlikely there is any value in the distribution of the psychological effects on these participants’ results when considering their exposure to traumatic material. No information was available whether jurors who took part in this study were representative of jurors in general.

Study 3 - (Chamberlain & Miller, 2009)

This qualitative study was in the US where participants have been exposed to the murder of fellow judge, Chuck Weller, and where there have been other assaults on judges. This may well have an impact on the results regarding safety fears. Results

would be difficult to transfer to other countries. This study is not repeatable and therefore not externally valid.

Study 4 - (Cheung & Boutte-Queen, 2000)

This study showed evidence of self-report bias and the possible effects of training. Limitations also included the study's sampling procedure, for example, data was collected through existing data from training programmes without random sampling techniques, so may not be representative of a complete set of responses from police or social workers, the authors did acknowledge this.

Study 5 - (Ennis & Horne, 2003)

The development of the Clinician Survey was not detailed adequately in this study and not repeatable.

Study 6 - (Harrison & Westwood, 2009)

This study had a small sample size of just 6, although the qualitative nature of the study and thorough quantitative method for recruiting the participants provided a richness of data from this study.

Study 7 - (Kadambi & Truscott, 2004)

It is possible that response bias affected the results of this study as those therapists who were doing well emotionally may have been more likely to respond to this assessment. This could impact upon the results, which suggest that only 5% of participants in the study showed raised levels of traumatic stress.

Study 8 - (Steed & Downing, 1998)

This study would not be repeatable as the detail provided is not adequately explicit in any areas. There are no statistics or descriptions of how the results were achieved e.g. high inter rater reliability. Furthermore, the sample was not homogenous.

The authors argued that their sample diversity provided ‘a greater exposure to different experiences’. With a small sample size, just 12, this study is unlikely to provide enough data from which to draw any valuable conclusions. As some of the participants declared they could not remember what they believed or how they functioned before working in this area, it is therefore possible that some of the participants would be unable to report whether they had changed over time or not as a result of their work. The study does not indicate whether the participants were specifically asked about this or whether it was implicit from the analysis. However authors do indicate this was a limitation and suggested that a longitudinal study would give more insight into the cumulative effects of vicarious trauma. The authors gave no detail on the questions used in the study to be able to see if findings might contribute to other areas.

Study 9 - (Vrklevski & Franklin, 2008)

It was not clear in the study who/what the ‘participating organisations’ were. This was because managers of Metropolitan legal centres sent out emails requesting staff to volunteer to take part in a survey that was looking into vicarious trauma. No detail was given about what the participants were told about data that was being gathered or its’ use. As with other studies in this review, there was evidence of selection bias as they may have attracted only those individuals interested in vicarious trauma. Authors state their Vicarious Trauma Scale and Satisfaction With Work Scale assessment tools were developed but give no references to how, where or who they were developed by. The authors failed to assess the percentage of type of violence in each criminal lawyers practice, making comparisons of this study with others focussing solely on working with sexual offenders difficult.

Descriptive Overview of Results

Methodology and population of studies

Given the variations in the included studies, it is not surprising that the study populations and methodologies also varied considerably. There was a mixture of study methodologies and a wide range of professions ($n=10$) featured amongst the populations, see Table 4. Some studies included similar professions: social workers (studies 1 & 4), sex offender therapists (studies 5 & 7) and counsellors (studies 7 & 8), there were another seven different professions included in the studies. It is possible that the professions in studies 1, 4, 5, 7 and 8 somewhat overlap in their roles (sex offender therapist; mental health therapist; counsellor; therapist and psychologist). As insufficient information was available in the studies to condense any combination of these into fewer professions, the terms provided within the original studies have been maintained in this review. Of the nine studies, there were three qualitative only studies (studies 3, 6 & 8), four quantitative only studies (studies 4, 5, 7, & 9) and two studies that employed both qualitative and quantitative methods (studies 1 & 2). The use of mixed samples (e.g. study 4) also makes it more difficult to generalise results as it introduces a number of potential confounding variables. The sample sizes recruited for each study also showed marked variation, ranging from 221 (Kadambi & Truscott, 2004) to just 6 (Harrison & Westwood, 2009).

Table 4
Study design and distribution of participants' occupations

I.D.	1	2	3	4	5	6	7	8	9	Total
Qualitative	✓	✓	✓			✓		✓		3 (+2 both)
Quantitative	✓	✓		✓	✓		✓		✓	4 (+ 2 both)
<i>n</i>	214	159	9	114	59	6	221	12	100	894
Sex Offender Therapist					✓		✓			2
Lawyer									✓	1
Social Worker	✓			✓ (<i>n</i> =86)						2
Juror		✓								1
Judge			✓							1
Police Officer				✓ (<i>n</i> =28)						1
Mental Health Therapist						✓				1
Counsellor							✓ (<i>n</i> =86)	✓ (<i>n</i> =4)		2
Therapist							✓ (<i>n</i> =64, <i>n</i> =71)			1
Psychologist								✓ (<i>n</i> =8)		1

Measures and demographics of studies

The measures utilised in the studies explored a variety of domains in relation to the impact of an individual's exposure to trauma upon their well-being. Five studies (1, 2, 3, 6 and 8) conducted qualitative open questionnaires to gather demographic information and to assess various aspects of their participants work (such as length of time in their job and working with trauma, supervision, age and gender). Four studies conducted specific surveys designed for their research to collect similar information (studies 2, 4, 5 and 7), and two studies used their own questions alone without any

additional measures (studies 4, and 8). The demographics of the populations of the review studies can be seen in Table 5.

Table 5
Demographics of study populations

Study	Age	Gender		Years of work in field	Marital Status		Ethnicity/ Nationality	Educational Level		
ID		Male	Female		Not	Married		Other	Bachelor Degree	Master's Degree+
1	24-65 M=39.11 SD=9.86	14%	86%	1-40 M=10.89 SD=7.98	28%	72%	Jewish 86% Arab 14%	n/a	43%	57%
2	Not given	44%	56%	n/a	Not given		Protestant 57% Catholic 19% Agnostic/ Atheist 6% Other 24%	Not given		
3	Not given	78%	22%	Few months - 15 years	Not given					
4	21-46 M=29.46 SD=3.94	18%	50% 32% no respon se	1-24 M=8 SD=6.4	Not given					
5	27-81 M=46	47%	53%	Not given	Not given		Caucasian 90% Other 10%	-	5%	95%
6	49-59	Not given		10-30	Not given			-	-	100%
7	21-63 M=42	16%	84%	1-38 M=11.49 SD=7.9	Not given			6.8%	24.9%	68.3%
8	26-59	0%	100%	1-18	Not given					
9	24-64 M=39.7 SD=11.08	36%	64%	Not given			Anglo- Saxon 73% European 4% Middle Eastern 3% Asian 3% Not reporting 14%	75%		25%

In the absence of a universally acceptable measurement tool for assessing the effects of exposure to working with victims of trauma or exposure to traumatic material, the studies employed a wide variety of measures within their research as can be seen within Table 6. This included recognised measures as well as those tailor made by the authors themselves. This inconsistency in assessment complicates any attempts at comparing the results. The Impact of Life Scale was used in two studies (7 and 9) as part of a battery of other measures and was the only measure used more than once in different studies. Some studies conducted a battery of assessments (1, 2, 5, 6, 7 and 9). The most comprehensive battery was that used in study 9, exploring solicitors' responses to exposure to traumatic material. They used a measure for depression and anxiety, alongside impact of event, satisfaction with work, vicarious trauma and trauma and attachment belief scales. Study 7 used three measures, impact of event, burnout and stress belief scales. Study 2 used a small battery of just two scales measuring depression and anxiety, whilst study 1 measured for secondary traumatic stress and posttraumatic growth. Other studies chose their own measures, one of these (study 5, participants sex offender therapists), included a symptom checklist with their own questionnaire.

Table 6
Employment of measurement scales

Study I.D.	1	2	3	4	5	6	7	8	9
Qualitative Open Questions	✓	✓	✓			✓		✓	
Survey designed specifically for study		✓		✓	✓		✓		
Secondary Traumatic Stress Scale	✓								
Traumatic Stress Institute Belief Scale (TSI)							✓		
Trauma and Attachment Belief Scale (TABS)									✓
Post-Traumatic Growth Inventory	✓								
Center for Epidemiological Studies Depression Scale (CESDS)		✓							
Stait-Trait Anxiety Inventory		✓							
Depression, Anxiety and Stress Scales (DASS)									✓
Los Angeles Symptom Checklist					✓				
Professional Quality of Life: Compassion Fatigue and Satisfaction Sub-scales, R-III (Pro-QOL)						✓			
Maslach Burnout Inventory - Human Services Survey (MBI)							✓		
Impact of Event Scale							✓		✓
Satisfaction with Work Scale (SWWS)									✓
Vicarious Trauma Scale (VTS)									✓

The measures used in the studies reviewed explored a range of domains discussed below:

Stress as a result of working with, or helping, traumatised others:

Across the nine studies in the review, seven different measures of stress responses to trauma exposure were used within five of the studies (Ben-Porat & Itzhaky, 2009; Ennis & Horne, 2003; Harrison & Westwood, 2009; Kadambi & Truscott, 2004; Vrkleviski & Franklin, 2008). These included: The Secondary Traumatic Stress Scale

(Bride, Robinson, Yegidis, & Figley, 2003) which was used to assess the overall level of secondary traumatisation of family violence therapists (Ben-Porat & Itzhaky, 2009); The Los Angeles Symptom Checklist (King, King, Leskin, & Foy, 1995), used by Ennis and Horne (2003) to measure overall psychological distress and PTSD specific symptoms in therapists working with sex offenders; The Traumatic Stress Belief Scale (Pearlman, 1996) was used to assess cognitive disturbance in relation to traumatic exposure (safety, trust, intimacy, esteem and power) amongst therapists working with victims of sexual violence (Kadambi & Truscott, 2004); The Professional Quality of Life Compassion Fatigue and Satisfaction Sub scales (Stamm, 2009) assessed for positive and negative affects amongst mental health therapists helping others experiencing trauma (Harrison & Westwood, 2009); The Vicarious Trauma Scale was developed specifically for the study (Vrklevski & Franklin, 2008) to assess subjective levels of distress associated with solicitors working with traumatised clients; The Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1980) measured therapists' trauma related distress reactions to stressful events with two sub scales, avoidance and intrusion by Kadambi and Truscott (2004), and Vrklevski and Franklin (2008) who used a newer version IES-R, which had the additional measure of vicarious trauma effects and hyper arousal in criminal solicitors. Vrklevski et al also used the Trauma and Attachment Belief Scale (Pearlman, 2003) to measure disruptions to cognitive schemas as a result of their exposure to victims of trauma.

All of these measures were used with employees working with victims of trauma in a helping capacity, and none were used with staff exposed to traumatic material and information alone.

Mood assessment:

Bornstein et al (2005) used two measures of mood, the Centre for Epidemiological Studies Depression Scale (Fischer & Corcoran, 1994) and the State Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) amongst jurors when looking at potential stressors of jury duty which included some traumatic material. The Depression, Anxiety and Stress Scale (Lovibond & Lovibond, 1995) was used as part of Vrkleviski and Franklins' (2008) study to measure depression, anxiety and stress amongst solicitors working with victims of crime.

Growth:

Ben-Porat and Itzhaky (2009) utilised the Post-Traumatic Growth Inventory (Tedeschi & Calhoun, 1996): to examine positive changes in therapists after working with victims of trauma.

Effect at work of exposure to traumatic material:

The Satisfaction with Work Scale is a short 7 question measure designed by Vrkleviski and Franklin (2008) to measure solicitors' satisfaction with their work, as part of the larger battery of assessments used in their study. Kadambi and Truscott (2004) applied the Maslach Burnout Inventory (Schaufeli, Leiter, Maslach, & Jackson, 1996) to assess professional burnout amongst therapists working with victims of trauma for three central aspects, emotional exhaustion, depersonalisation and a decreased sense of personal accomplishment.

It is noteworthy that within all of the above studies, only Bornstein et al (2005) used a measure with individuals not working in a helping role with victims of trauma in some way, and even this study was only loosely connected with experiences relating to traumatic exposure as a result of jury service.

Psychological effects of non front line occupational exposure to trauma

This systematic review aimed to identify what research suggests is the psychological effect of working with traumatic material upon staff employed within the criminal justice system. Table 7 shows those studies reviewed that provide evidence of there being any effects reported upon their participants.

Table 7
Specific contribution to review objectives

ID	Evidence of any psychological effects of working with traumatic material?	No effect	Positive effect e.g. personal growth, resilience	Negative effect e.g. vicarious trauma	Positive & Negative effect
1	✓				✓
2	x	✓			
3	✓			✓	
4	✓			✓	
5	✓	✓			
6	✓	✓			
7	✓	✓			
8	✓			✓	
9	✓				✓

Themes of findings

A variety of categories and themes were explored within the nine studies included in the review. Given the heterogeneous nature of these themes and the studies themselves, it is difficult to combine these to any extent. However, findings have been grouped with common themes to aid interpretation of the results.

Personal and professional characteristics.

A variety of personal and professional characteristics and their relationships with the impact of exposure to traumatic material were discussed in the studies reviewed.

These included self-report bias (Ben-Porat & Itzhaky, 2009; Cheung & Boutte-Queen, 2000; Kadambi & Truscott, 2004; Vrkleviski & Franklin, 2008); previous experiences (Ennis & Horne, 2003; Vrkleviski & Franklin, 2008); empathising with clients (Harrison & Westwood, 2009), appreciating life, having the ability to balance work and home life (Steed & Downing, 1998) and coping strategies (Vrkleviski & Franklin, 2008).

Personal trauma history was not found to be significant in Vrkleviski and Franklins' (2008) study. Any differences between their groups were consistent across trauma levels. Participants in both groups (i.e. those working with both traumatised and non traumatised clients) with a multiple trauma history displayed great vicarious trauma effects.

Strategies for working with traumatic exposure and job related stress

Strategies were explored by study 9, Vrkleviski and Franklin (2008) who found that there were no significant differences between solicitors working with traumatised clients (criminal solicitors) and those not working with traumatised clients in relation to their coping strategies, other than those working with traumatised clients were more likely to seek peer support. In general strategies included seeking peer and family support, eating, religion, exercise/sport, reading and listening to music. More criminal solicitors sought professional support (36% compared to 20% non criminal solicitors), although this figure was not statistically significant between the groups. Whilst both groups employed similar strategies for dealing with work stress, only 50% of the participants considered discussing this with a work supervisor, they were twice as likely to look for peer support.

Support for employees in relation to the impact of their work

Three studies acknowledged a variety of sources of support for employees including professional, peer and family support.

Bornstein et al (2005) examined the effect of professional debriefing after a trial. Although jurors stated their appreciation of the debriefing interventions post trial, when they were assessed a month later, they showed no benefits to the level of their negative symptoms. Ennis and Horne (2003) assessed whether or not having peer and family support and supervision was linked with negative impacts of the participants work and found that peer support was negatively associated with general psychological distress. Therapists reporting case loads with higher numbers of domestic violence victims-survivors or perpetrators reported more symptoms of stress. A good relationship with colleagues and social support were reported to reduce the negative psychological effects upon participants, including burnout. Receiving supervision was negatively correlated with vicarious trauma symptoms in this research. Social support from friends, family, and peers also had a significant negative correlation with vicarious trauma symptoms. Vrkleviski and Franklin (2008) suggest that employers of solicitors working with traumatised clients need to recognise the impact of this upon them, and that organisations need to raise awareness, train and support those staff that may be affected by their work.

Impacts of working with traumatic material (positive, negative, job satisfaction and personal growth).

All studies identified various impacts of working with difficult material and these included: personal growth, safety concerns, trauma, fear, anxiety, depression, emotional responses, shifts of cognitive schemas and paranoia. Measures were used in to order to examine the impact of this upon respondents' work and personal life. For example, when using the Satisfaction with Work Scale as a measure, Vrkleviski and Franklin (2008) found no significant differences between their two groups of

participants in terms of their overall satisfaction with their work. This indicates that working with traumatised clients made no change to whether a solicitor was satisfied with their job or not. Furthermore, that even though working with traumatised clients and material can be distressing, there can also be elements of satisfaction in helping these clients. Steed and Downing (1998) also found that counsellors working with victims of trauma reported satisfaction in their work and this included being part of their clients healing process, and feeling that their work was meaningful and worthwhile. It is possible that future research could identify if this attitude to working with traumatised clients reduces the risk of experiencing trauma from this work (Sabin-Farrell & Turpin, 2003).

Evidence of anxiety, depression, or both has been identified amongst judges, jurors and solicitors as a result of their exposure to traumatic material (Bornstein, et al., 2005; Chamberlain & Miller, 2009; Vrkleviski & Franklin, 2008).

The qualitative part of Ben-Porat and Itzhakys' (2009) study revealed both positive and negative changes in therapists working with traumatic material. Negative changes were identified that included difficulties within spousal relationships and respondents view of the world and humanity. Positive changes in the development of constructive communication skills and improved spousal relations and parenting skills. Workshops and study days were suggested as a method to enhance awareness of these consequences to both staff and their supervisors (Ben-Porat & Itzhaky, 2009).

Harrison and Westwood (2009) suggested that therapists' working with traumatised clients, rather than depleting their well being, actually energised them.

Vicarious trauma and exposure to traumatic material

Six studies in the review explored vicarious trauma experiences with their participants; five of these were conducted with therapists/counsellors (Ben-Porat & Itzhaky, 2009; Ennis & Horne, 2003; Harrison & Westwood, 2009; Kadambi & Truscott, 2004; Steed & Downing, 1998) and one with criminal solicitors helping victims of crime (Vrklevski & Franklin, 2008).

A single measure for the assessment of vicarious trauma has not been used in any of the studies included in the review, resulting in a number of scales being implemented to assess for its' presence. Vrklevski and Franklin (2008) employed a battery of five measures that included the Vicarious Trauma Scale, Depression and Stress Scales, Impact of Event Scale (IES) and Trauma and Attachment Belief Scale when assessing vicarious trauma effects on solicitors exposed to traumatic material. Their study included staff working with all types of violence, including sexual violence, and may not be readily comparable with other studies with helping professionals. They found that the level of vicarious trauma was higher with solicitors working with traumatised clients (criminal lawyers) than those working with non-traumatised clients (such as conveyancers) and they reported higher levels of subjective distress, self-reported vicarious trauma, depression, stress and cognitive changes in relation to safety and intimacy. Although the IES did not produce significant differences between their groups, the criminal lawyers reported higher levels of avoidance, intrusions and hyper arousal.

Harrison and Westwood (2009) suggested that therapists working with victims of trauma utilised protective practices in their work that reduced the chances of them experiencing vicarious trauma. The study concluded that the ability to empathise with

clients who had been traumatised reduced the participants' risk of experiencing vicarious trauma.

Kadambi and Truscott (2004) found that only 5% of therapists working with sex offenders in the study showed raised levels of traumatic stress. Authors found no significant effect of the amount of time spent either, with offenders or in supervision, upon the respondents' likelihood of experiencing vicarious trauma. They called for the development of more sensitive assessment tools that could accurately measure and differentiate vicarious trauma from other work related stress responses such as burnout. Further they called for a 'reconceptualisation of the phenomenon of vicarious trauma' as they suggested that assuming that an employees' exposure to clients' traumatic material may not be the catalyst that causes vicarious trauma that is often assumed to be. They recommend the assumptions around the cause of vicarious trauma amongst professionals are worthy of further examination. Concluding that the resilience possessed by the participants in the study may provide a more complete understanding of how mental health professionals flourish in their chosen professions.

Steed and Downing (1998) looked at the impact of repeated exposure to traumatic client imagery and material upon psychologists and counsellors working with victims of sexual assault. They found that whilst over half of their participants had become more suspicious and distrusting as a result of their work, that they also developed positive changes in their sense of identity and self-belief. They concluded that experiential evidence did confirm the existence of vicarious trauma, claiming an impact on both their professional and personal lives. They called for a wider conceptualisation of vicarious trauma to account for the full range of effects found amongst their participants.

Secondary traumatisation and exposure to traumatic material

Secondary traumatisation as a result of exposure to trauma was explored by three studies (Ben-Porat & Itzhaky, 2009; Chamberlain & Miller, 2009; Ennis & Horne, 2003). Two of these were conducted with helping professionals, and one with judges exposed to both victims of crime and traumatic material (Chamberlain & Miller, 2009).

Ben-Porat & Itzhaky (2009) found there were no significant differences in levels of secondary traumatisation found between social workers who were employed within the field of family violence ($n=143$) and those that were not ($n=71$). There were only average levels of secondary traumatisation in both groups and no evidence of raised psychological effect of working with traumatic material with either.

Chamberlain and Miller (2009) produced a 77% agreement rate between the raters that judges were at risk of Secondary Traumatic Stress with judges admitting that trials can often be traumatic and emotional for all of the parties involved. There was 96% rater agreement that the judges showed possible signs of stress due to safety concerns.

Burnout and exposure to traumatic material

Studies in this review did not indicate that burnout was an effect of exposure to traumatic material. Whilst identifying judges' occupational experiences, Chamberlain and Miller (2009) produced raters' inter-coder reliability of 94% indicating that judges were vulnerable to professional burnout due to large caseloads and other responsibilities.

Ennis and Horne (2003) identified that a good relationship with colleagues and social support were reported to reduce the negative psychological effects upon

participants, including burnout. The study found no evidence of burnout or traumatic stress as a result of working with sex offenders.

Age and gender, and the impact of working with traumatic material

Three studies investigated gender, and one considered age, and the impact of exposure to traumatic material. Of these, Vrkleviski et al (2008) found no significant differences between age and gender in their study of solicitors. Bornstein et al (2005) found a significant number of female jurors declared higher levels of stress on more factors than the male jurors did. Whilst Ennis and Horne (2003) found that gender was not a significant predictor of trauma symptoms amongst sex offender therapists.

Training

The provision of specialist training to staff to help them deal with the impact of unresolved feelings (Cheung & Boutte-Queen, 2000), and the need for the education and training of staff exposed to traumatic material (Steed & Downing, 1998) have been suggested as ways to help mediate effects of this work. Ben-Porat and Itzhaky (2009) suggest that a way to reduce the stress experienced by participants exposed to traumatic experiences of others (family violence), would be to develop systems that allowed the therapists to process the negative effects of their work, legitimising their feelings. Putting debriefing in place as support for staff working with traumatic material did not produce changes in levels of stress or depression, despite participants reporting the debriefing as helpful (Bornstein, et al., 2005).

Discussion

Interpretation of findings

The current systematic review aimed to explore the psychological effects of exposure to traumatic material amongst non front line CJS staff. Nine studies were examined with the view to achieving this.

Heterogeneity of studies

This review considered studies that utilised a variety of qualitative and quantitative measures. The authors themselves designed some of these and others were standard tests adapted for use in the studies. Some divided participants into categories according to the extent of their exposure to trauma in their work and others divided participants into groups, such as those who did work with exposure to others trauma and those who did not. Authors that combined both qualitative and quantitative measures appear to have done so because of the absence of a 'catch all' measure for the effects of working with trauma. In these cases the inclusion of qualitative measures may have accessed content that would not be exposed through the quantitative measures available by themselves. Sabin-Farrell and Turpin (2003) suggest that measures for secondary traumatisation are not assessing all the facets related to it and consequently not highly constructive for assessment. These findings also appeared to be reflected in the studies as no single or multiple assessment measure had been identified in the studies as adequate for assessing vicarious trauma, burnout or secondary trauma, and allowing a comparison between these. This was further evidenced by the lack of consistency with measuring and quantifying vicarious trauma and other psychological effects of working with traumatic material amongst the studies. For this reason authors made recommendations to reconsider the idea of vicarious trauma itself, for example, developing it to include a continuum of cognitive schema shifts (e.g. Kadambi & Truscott, 2004; Steed & Downing, 1998). This would provide a more encompassing theory and perhaps then enable the development of an appropriate measure. Without this there have been a variety of interpretations of the psychological effects of working with

traumatic experiences of others or traumatic material, produced within these reviewed studies.

Psychological effects

The studies included in this review suggested that there are psychological effects as a result of working with traumatic material upon non front line staff employed within criminal justice systems. Some positive, some negative and some both. The studies provided evidence of vicarious traumatisation, secondary trauma, personal growth and resilience, upon their participants as a result of their exposure to traumatic material and experiences of others. Steed and Downing (1998) suggested placing these effects onto a straightforward continuum and removing the divide as a useful way to consider how all this research fits together. Themes emerged that show negative change in participants as a result of their exposure to traumatic material that are consistent with the theory of vicarious trauma (Pearlman & Saakvitne, 1995). These changes have included: changes in participants view of the world, changes in their sense of security and trust in others. Burnout was not identified as an outcome of exposure to traumatic material. Secondary traumatisation was only identified as a negative outcome from traumatic exposure in Bornstein et al's (2005) study of judges, other studies suggested traumatic exposure made no difference to the professionals risk of experiencing secondary trauma. Vicarious trauma (VT) was the most common psychological effect researched in the studies and produced evidence that many participants experienced both growth and vicarious trauma as a result of their work and empathising with clients reduced the risk of VT. As all of the studies investigating vicarious trauma had participants that worked in a helping role, it is possible that vicarious trauma is more likely to be experienced as a result of empathising with clients traumatic material (Pearlman & Mac Ian, 1995).

However, the absence of a single measure for this means that between study comparisons are not possible for this review.

Influencing factors

Age was not found to be an influencing factor, although being female was negatively associated with higher levels of stress resulting from exposure to traumatic material (Bornstein, et al., 2005; Ennis & Horne, 2003; Vrkleviski & Franklin, 2008).

Satisfaction with work was not negatively influenced by exposure to traumatic material, and in some cases, such exposure could result in positive growth (Ben-Porat & Itzhaky, 2009; Harrison & Westwood, 2009; Steed & Downing, 1998; Vrkleviski & Franklin, 2008).

Strategies for coping with exposure to traumatic material did not differ between staff who were exposed and those who were not, and participants expressed utilising similar strategies to cope with their work irrespective of the presence of traumatic material (Vrkleviski & Franklin, 2008). Although the ability to put clear boundaries in place to maintain the personal and professional lives of participants was reported as a successful coping strategy amongst therapists (Ben-Porat & Itzhaky, 2009).

Professional support made no difference to levels of negative symptoms in Bornstein et al's (2005) study. However, Ennis and Horne (2003) suggested that peer support, social support from friends, family and peers and supervision reduced the levels of negative psychological effects results from exposure to traumatic material. They also found that therapists with a higher workload consisting of trauma victim clients reported more negative effects than others. However, Vrkleviski et al (2008) found participants were more likely to seek support from their peers than from a work supervisor when dealing with work related stress.

Personal trauma history was not found to be a significant influence upon psychological impacts resulting from exposure to traumatic material (Vrklevski & Franklin, 2008).

Training and education about the possible psychological effects of exposure to traumatic material was recommended in several studies and that organisations need to raise awareness, train and support those staff who may be affected by their work (e.g. Vrklevski & Franklin, 2008).

Strengths and weaknesses of review

The current systematic review has a number of strengths and limitations. With regards to the methodology of conducting the review, the use of strict inclusion/exclusion criteria meant that some relevant studies may have been inadvertently excluded. Similarly, due to time constraints, only published English language studies were included in the review, which may have introduced a source of bias. It is noted that all of the studies included in the review were conducted outside of the UK, which clearly limits the ability to generalise the findings of the review to employees working with the CJS in the UK. There were no studies including staff working as crime analysts or similar. As the CJS in the UK varies from those of other countries featured in reviewed studies, outcomes may not apply to UK staff in similar professions.

There were a relatively small number of studies included with a wide variety data collection methods, populations and measures, making direct comparisons between them difficult. None of the studies reviewed assessed professionals exclusively working with traumatic material, their sample populations varied but mainly focussed on client facing professions (e.g. social workers, therapists, judges). Other staff employed within criminal justice systems such as analysts and crown prosecution staff

were not assessed for psychological effects of working with traumatic material within the review for relevant research.

None of the studies provided full details of the allocation of participants. There was no concealment of the intention of the research in any of the studies. Therefore, the nature of these studies meant that any random allocation was not applied to participants, therefore it is likely that some bias is present from the descriptions in the nine studies. With regards to data collection methods used within the studies in this review, the majority of studies relied on self-report questionnaires as measures, which rely upon participants being accurate in their perception and reporting of their responses. In addition, participants may have been reluctant to disclose issues relating to negative responses to traumatic exposure for fear of negative reactions in their workplace

The main difficulty with researching exposure to traumatic material in any context is the variation in definitions of exposure to traumatic material, which can clearly have an impact upon a study's findings and interpretation. The disadvantage of this means a wide variety of measures have been used between the studies and such variations make it more difficult to draw overall conclusions.

The review identified a gap in research regarding the psychological effects of working specifically with traumatic material upon such staff and particularly in the UK. The need for further research based on qualitative design to gain valuable subjective experiences has been highlighted, that many previous studies have lacked. Furthermore, no longitudinal studies have been identified which could offer a more in-depth view of how working with this material may be impacting upon staff in criminal justice systems over an extended time frame.

Conclusions and implications

In conclusion, the current review sought to systematically explore the effects of working with traumatic material on non front line staff within the criminal justice system. The findings confirmed that there are effects of working with traumatic material upon these employees. There are both negative effects (for example, vicarious/secondary traumatisation and burnout) and positive effects (personal growth).

The issue of employees experiencing stress as a result of their work being more likely to seek peer support than organisational support raises questions about organisational dynamics and their responses to employee stress. It further raises the question as to why staff do not use professional assistance, e.g. not available or perceived lack of confidentiality.

Exposure to traumatic material produced both positive and negative psychological effects according to participants in the reviewed studies. As a result of evidence that professionals working with traumatic material are reporting positive effects (Ennis & Horne, 2003), it is possible that professionals working with traumatic material within criminal justice systems may be able to mitigate negative psychological effects by understanding what leads to both positive and negative outcomes.

Educating employees to understand and deal with their exposure to traumatic material through workshops, study days, education and training all have implications for both organisations and employees. There is a financial cost to implementing such suggestions for all staff exposed in this way. Conversely there may be a financial cost for not providing it. Either way, there is clearly a psychological cost as a result of the effects of working with traumatic material upon the staff so employed. Whether it is

realistic for all those who are exposed to traumatic material to have such education is certainly worthy of further exploration.

Despite its limitations, this review has some important practical implications. It reinforces the notion that exposure to traumatic material whilst working in non front line occupations within the CJS remains an important issue that requires additional research.

Although measures such as the TABS, TSI, STSS etc represent useful tools to identify the variety of psychological domains experienced by such employees, they may be excluding more specific, emotive and subjective aspects of the exposure to traumatic material itself. The wide range of measures used in the studies highlights the need to produce an appropriate battery or measure/scale that adequately measures the specific effects of this work.

It is important that the trend in recent studies to explore the effects of exposure to traumatic material continues in order to replicate and add strength to the associations already found. Longitudinal studies would provide the opportunity to explore these effects over an extended period of time. The more that can be understood about potential risk factors and predictors of psychological effects of exposure to traumatic material amongst criminal justice system staff, the more this will aid organisations and individuals in developing effective programmes to minimise any negative effects.

The current chapter identifies a need for further research on the psychological effects of working with traumatic material and information upon staff employed within the CJS in the UK in non-client facing occupations such as analysts. Reviewed studies have included assessments for depression and anxiety independently (STAI, CESDS and DASS), along with measures that include symptoms of depression and anxiety

(TSI, STSS and TABS) as they are components of vicarious trauma, secondary trauma and burnout. Another simple measure for the constructs of both anxiety and depression is the Hospital Anxiety and Depression Scale (Snaith & Zigmond, 1994). This could be a straightforward method to assess the experiences of crime analysts exposed to traumatic material, working in the UK CJS.

The research and literature discussed previously (Chapter 1) indicate that there can be negative effects of working with other people's traumatic material. Throughout this thesis the potential impact of such work has been documented. It is important to be able to identify such effects, consequently there would appear to be a need for a reliable and valid assessment tool, which measures some of these negative effects. As seen in this chapter, there is little consistency across existing studies of such measures. The next chapter presents a critique of such a measure, the Hospital Anxiety and Depression scale, developed by Zigmond and Snaith (1983).

CHAPTER III - PSYCHOMETRIC CRITIQUE

A critique of the
Hospital Anxiety and Depression Scale
(Zigmond and Snaith, 1993)

Abstract

The ability to measure possible negative impacts of working with traumatic material has been considered across various studies. This critique described such a measure, the Hospital Anxiety and Depression Scale (HADS) and discussed previous studies that had used this measure. Moreover, the reliability and validity of the measure was examined. In addition, the implication and limitations of using this measure in research and practical settings were discussed.

Introduction

The Mental Health Foundation (<http://www.mentalhealth.org.uk/help-information/mental-health-statistics>) states that anxiety and depression together are the most common mental disorder in Britain. Professor Mark Williams (2011) reported that levels of both depression and anxiety have altered considerably over the last 30 years, identifying a shift of around 1 SD, showing a general increase that would have been considered at a clinical level 50 years ago. These rapid and recent changes, he claims, cannot be genetic changes but must be environmental. He suggests the driving forces behind this increase in individual depression are the way we think about life, where we feel we are in relation to other people and our own standards and the standards other people set for us. As a result, society is changing in the way it expects us to do things and the targets it sets for us and the pressure to meet, or failing to meet, those targets, in the workplace, in particular. For this reason it is important to be able to diagnose anxiety and depression in individuals both in and out of clinical settings (e.g. Dobson, 1985). Gershon and Lin (2002) surveyed experienced police officers and found their perceived work stress was associated with anxiety, depression, post traumatic stress

symptoms and burnout. Chen et al (2006) found police officers experienced higher rates of depression and anxiety than the general population resulting in a poorer quality of life for them. The discussion in Chapter 1 explored a range of symptoms resulting from traumatic exposure and these included anxiety and depression. Furthermore, the literature review in Chapter 2 identified that depression and anxiety were experienced by judges, jurors and solicitors as a result of their exposure to traumatic material (Bornstein, et al., 2005; Chamberlain & Miller, 2009; Vrkleviski & Franklin, 2008). As these occupations are non front line staff working within the CJS, it is possible that other staff with similar exposure, such as crime analysts, could also be experiencing depression and/or anxiety as a result of their exposure to traumatic material at work.

Depressive and anxiety disorders have been defined by the DSM-IV and Kleiman and Riskind (2012) suggest that they are highly co morbid and that over half of patients with depression will also have an anxiety disorder. Anxiety disorders are a group of related conditions that vary from person to person, but symptoms can include emotional (such as apprehension feelings, irritability, feeling restless, watching for signs of danger) and physical symptoms (e.g. fatigue, insomnia, pounding heart) (Wetherell, Gatz, & Pedersen, 2001). Depression can also vary from person to person, although there are common symptoms including feelings of hopelessness and helplessness, loss of interest in activities, anger or irritability, reckless behaviour, physical symptoms such as headaches and stomach pain (Meakin, 2006). A variety of risk factors for depression and anxiety have been identified including gender, past personal trauma, low self esteem, maladaptive coping styles, stressful life events, low social support and insecure attachment (Wang, Inslicht, Metzler, Henn-Haase, & Shannon, 2010).

As discussed in earlier chapters, past research has shown that work stress and trauma exposure can place employees at heightened risk for the development of depression and anxiety. Both anxiety and depression are symptoms that are commonly linked to secondary traumatic stress disorder, vicarious trauma and burnout following exposure to traumatic material (e.g. McCann & Pearlman, 1990; Pfifferling & Gilley, 2000; Schaufeli, et al., 2008; Violanti, 2006). These studies have identified a prevalence of symptoms in professionals exposed to traumatic material through their work. It is therefore possible that employees facing similar exposure to traumatic material and professional experiences, such as crime analysts, could be experiencing symptoms of anxiety and depression. The ability to detect whether or not crime analysts are experiencing either of these would be a useful contribution towards exploring their professional experiences of working with traumatic material.

However, both depression and anxiety can often remain undetected in clinical practice (Hinz & Braehler, 2010). According to Williams, et al., (2010), some individuals may enjoy high levels of satisfaction from very similar experiences that lead other people to become depressed and anxious. Measuring these differences is helpful in contributing to our understanding of these specific kinds of individual differences. Such measurement also provides the ability to understand variance over time and situations, and why some people might be anxious on some days and not others, and why depressive episodes can vary in intensity and duration. Measurement also allows the identification of variables that moderate and mediate such behaviour problems, and the development of effective interventions to reduce behaviour problems and promote life satisfaction. Figures providing prevalence of anxiety and depression within CJS staff are not available, although evidence of anxiety, depression, or both has been identified

amongst judges, jurors, solicitors and police as a result of their exposure to traumatic incidents or material (Bornstein, et al., 2005; Brown & Campbell, 1993; Chamberlain & Miller, 2009; Vrkleviski & Franklin, 2008). Therefore, the ability to measure the constructs of anxiety and depression reported by crime analysts would provide valuable insight towards a better understanding their wellbeing.

Feldman (1993) suggests that anxiety and depression are closely related to each other, and some studies have questioned whether they are separate constructs at all (e.g. Dobson, 1985; Skarstein, Fossa, Skovlund, & Dahl, 2000). Research has suggested that anxiety may lead to depression due to it being a more stable construct (e.g. Parker, et al., 1999; Wetherell, et al., 2001). However, overall Dobson (1985) did acknowledge anxiety and depression as separate constructs, although did not accept that the self-report measures to assess them were able to distinguish between them well enough. Gaining quality data on the variables of anxiety and depression enables the development and testing of explanatory models and possible effective strategies for better understanding any potential professional difficulties, or enhancing quality of life, for individuals being studied.

This chapter is a review and critique of the Hospital Anxiety and Depression Scale (HADS) by Zigmond and Snaith (1983). It examines the HADS for its scientific properties, its applicability to the measurement of anxiety and depression in a variety of settings and how it compares to other similar measures, and its research uses.

Overview of the Hospital Anxiety and Depression Scale

The HADS was developed by Zigmond and Snaith (1983) who originally intended it to be used as a self-rating screening tool to identify cases of anxiety and depression amongst non-psychiatric clinical outpatients (known as 'caseness'). The HADS was

originally written in English but this has not stopped the worldwide use of the tool with it being translated into other languages including Dutch (Spinoven, et al., 1997), German (Hinz & Braher, 2010) Greek (Michopoulos, et al., 2008), Norwegian (Stordal, et al., 2001) and Swedish (Lisspers, Nygren, & Soderman, 1997). The publisher of the HADS provides 33 translations of the scale. Now extensively used with a wide range of populations, both clinical and non-clinical, the HADS has been seen as a popular and easy to administer self-report psychometric (McCue, Buchanan, & Martin, 2006).

The HADS assessment is a brief questionnaire containing 14 items. Consisting of two sub-scales the HADS measures anxiety (A-scale), and depression (D-scale) which are scored separately, each consisting of seven items. They describe the tool as a ‘present-state instrument’, that refers to the respondents’ feelings over the last week, as opposed to the immediate time in question. As the emphasis is strongly on feelings from the last few days the test can be re-administered at regular intervals, enabling the recording of progress.

Construction of the HADS

Zigmond and Snaith published their method of construction of the HADS (1983). Full details of their methodology are general in their approach. Scant accounts of how decisions were made to proceed at various stages throughout the construction, including absence of detailed analysis and methodology of their final measure are apparent, as is a self reliance on their clinical experience when making judgments relating to the construction of items in the measure as discussed below. When Zigmond and Snaith (1983) were designing the questionnaire they collected normative data from a sample of patients in a general hospital outpatient clinic. They intended to measure mutually exclusive levels of depression and anxiety. The specificity of the scale was further

developed by the removal of any items that were frequently ignored or incorrectly marked by the respondents. Items referring to physical symptoms were not included as they could be as a result of medical illness or treatment. The absence of these items is a unique feature of the HADS, which prevents any confusion between physical symptoms of depression or anxiety in the results (McPherson & Martin, 2011; Poole & Morgan, 2006), focussing on the cognitive and emotional aspects of depression and anxiety. The respondents completed a questionnaire containing items relating to generalised anxiety or depression. Following examination by the doctor the researchers interviewed the respondents without knowing what their responses had been. The interview assessed depression and anxiety according to various questions and the responses were analysed considering the respondents estimation of the severity of both anxiety and depression. This allowed the researchers to reduce the questions to the current total of just 14. The respondents had answered each item on a four-point response (0-3), producing possible scores for both scales of 0-21.

Scoring of the HADS

Established for screening purposes, the HADS gave three bands for scoring, normal, possible and probable, presence of depression or anxiety, or both. The measure was 0-7 for either sub scale regarded as the normal range, 8-10 suggesting the presence of anxiety or depression and 11+ indicating the possible presence of anxiety or depression as a mood disorder. In time, Snaith and Zigmond (1994) identified that the HADS could also be used as a measure of the intensity of anxiety and depression, which are now used and categorised as: normal (scores 0-7), mild (scores 8-10), moderate (scores 11-14) and severe (scores 15-21).

The HADS takes around 5 minutes to complete. Instructions advise the respondent to complete the questionnaire in order and for them to indicate how they have felt in the past week, not including physical symptoms. Once completed the scores for the items making up the two scales HADS-D and HADS-A can be calculated. Each sub-scale has the range of 0-21 and the scores can be interpreted as indicating mild, moderate or severe difficulty, the higher score suggesting a higher level of anxiety or depression.

Despite the authors (Zigmond & Snaith, 1983) not recommending results to be used from a calculation of the total score, in their review, Bjelland, et al., (2002) found several studies calculating a total score by adding together the depression and the anxiety scores. They found sixteen studies had identified eleven different cut-off scores for a total score from the HADS, ranging from 8 - 21. Singer, et al., (2009) recommended a cut-off score of 13 called the 'medium model.' Herrman (1997) reviewed over 200 studies investigating the psychometric properties of the HADS and suggested that there is not a single, generally accepted cut-off score for using to interpret the HADS scales. However, Bjelland, et al's, (2002) review of 747 studies examined the validity of the HADS and concluded that in the majority of studies the ideal cut-off score to suggest caseness was 8 or more.

The HADS has now been used widely in general population studies (e.g. Caci, et al., 2003; Chan, Leung, Fong, Leung, & Lee, 2010; and Hinz & Brahler, 2010) as well as within clinical practice (e.g. McPherson & Martin, 2011; Silverstone, 1994; Whelan-Goodinson, Ponsford, & Schonberger, 2009; and Woolrich, Kennedy, & Tasiemski, 2006) and research studies (e.g. Bjelland, et al., 2002; Cosco, Doyle, Ward, & McGee, 2012; and Herrman, 1997).

Psychometric Properties

Zigmond and Snaith (1983) intended the HADS to be a self-rating screening tool to identify cases of anxiety and depression. To evaluate this statement, the standard of the reliability and validity will be discussed to identify if the HADS is an accurate measure of the constructs of anxiety and depression.

Psychometric assessment is the evaluative process applied to psychological assessment data (Rust & Golombok, 1989). Kline (1993) states a good test must be theoretically based and have high reliability and validity. Appropriate norms and using levels of data no less than interval or ratio scales are also key components of a good test according to Kline. The HADS scales are interval scales, which allow the quantification of anxiety and depression.

Reliability

Reliability is the degree of consistency with which an instrument reflects the construct it is measuring. Reducing the potential level of error and increasing the scientific foundation of psychology is one of the aims of psychometric tools, however it needs to be recognised that within each psychometric tool there is some level of error. For those clinicians using the HADS, its reliability as a test is necessary to inform their appropriate responses to any results. This clearly has an impact upon those taking the test.

Internal reliability.

Internal reliability is the extent to which tests assess the same characteristic, skill or quality. Kline (2000) states that internal consistency reliability is a reflection on how the items test what they are supposed to measure within a psychometric tool.

Cronbach (1970) suggests a way to measure internal reliability of a test is to calculate

the average correlation of the items and look at how closely related they are. For example within the HADS, the 7 items within each sub scale should be closely related to each other because they should all be measuring depression, or anxiety. Cronbach's alpha coefficients calculate this correlation of items. Kline (1993) suggests Cronbach's alpha should not fall below a minimum of 0.70 and that a minimum of 200 respondents should be used for reliability to be acceptable in a test such as the HADS. Breakwell, Hammond, Fife-Shaw and Smith (2006) suggest this type of reliability can help researchers to interpret their data, predict the value of scores and predict the limits of any relationships amongst the variables. Nunnally and Bernstein (1994) recommend that the internal consistency when measured with Cronbach's coefficient alpha should be 0.60 or greater for a self-report measure such as the HADS, to be reliable, and 0.80 or greater if the tool is to be used as a screening instrument.

Research on larger samples has concluded that the HADS does satisfy both Nunnally, et al., (1994) and Kline's (1993) criteria. For example, Moorey, et al., (1991) obtained a Cronbach's alpha of 0.93 for the HADS-A scale and 0.90 for the HADS-D scale in their study of 568 cancer patients, establishing the internal consistency of the two sub scales. Michopoulos, et al., (2008) validated the HADS in a Greek general hospital sample ($n=521$) and all scores exceeded 0.80. Mykeltun, et al., (2001) found both sub-scales internally consistent with values of Cronbach's alpha 0.80 for anxiety and 0.76 for depression in their general population sample ($n=51930$) and higher within sub-populations with mental problems 0.80. The large sample size within Mykeltun, et al.'s study may have more credibility than other smaller studies and would suggest that HADS is a reliable screening measure. Herrman (1997) found that internal consistencies, when comparing the German and English version of the HADS were

acceptable at 0.80 to 0.93 for the anxiety sub scale and 0.81 to 0.90 for the depression sub scale, suggesting both were internally consistent. All of these studies satisfy Nunnally's minimum for a screening tool apart from the HADS-D within Mykeltun's study and they all support Kline's criteria for internal reliability.

Bjelland, et al., (2002) conducted an extensive review of the HADS providing support for its internal consistency, identifying Cronbach's alpha coefficients ranging from 0.68 to 0.93 for the HADS-A and 0.67 - 0.89 for the HADS-D scale. Only one study fell below Kline's criteria and this was a study with a small sample size of 78. Although eleven other studies in this review had sample sizes of less than 200 and together with the remaining studies, they all showed internal reliability.

McPherson, et al., (2011) studied 28 papers examining the suitability of the HADS as a screening tool for use in an alcohol dependent population. They looked at the underlying structure of the HADS using factor analysis and found good internal consistency across most studies and found only one (Karimova & Martin, 2007) of the 28 studies to fall below Kline's recommended internal consistency score producing a total score of 0.7, this study had a sample size of only 100. All the other studies were above this. Herrman (1997) conducted a validation review on 200 studies of the HADS and reported internal consistencies of 0.80-0.93 for the HADS-A and 0.81-0.90 for the HADS-D for the German version of HADS and found similar results within other studies, reporting slightly lower values in smaller studies.

Overall, it appears that individual and review studies confirm that, according to Kline's (1993) criteria, the HADS does possess internal reliability in that the level of error is relatively small and therefore the scores are likely to reflect the respondent's real level of depression and anxiety.

Test-retest reliability.

To estimate the reliability of a test it must be administered twice to the same participants with a gap between the two tests, this is called 'test-retest reliability.' Testing the same sample on two separate occasions and correlating the scores allows the measurement of the standard error of the test (1993), the minimum level of the correlations should be 0.70. Kline also suggests that three months is an appropriate time for a retest as a shorter time could produce retest correlation scores that are unnaturally high (2000). For the HADS to be considered to have test-retest reliability the comparisons between correlations on separate occasions, ideally a minimum of three months apart, would be 0.70 or higher.

As previously mentioned, the HADS assesses feelings from the previous days and theoretically lends itself well to administration to the same respondents on separate occasions, and has been used to measure change in patient's anxiety or depression levels at various stages of assessment. However, there seems to be a paucity of evidence of retesting of the HADS over the three-month period as suggested by Kline (2000) from which to draw conclusions about test retest reliability. Poole and Morgan (2006) found that retest reliability at two weeks was better for the depression sub-scale than the anxiety sub-scale, however they repeated this test outside of Kline's recommendation of three months. McPherson and Martin (2011) identified five studies of the HADS and examined the test-retest characteristics and only found one study with correlation scores above the minimum recommended by Kline, (0.90 for anxiety, 0.84 for depression and a total score of 0.94). Again, this particular study (Michopoulos, et al., 2008) retested participants after only 20 days and did not meet Kline's time period recommendation. McPherson and Martin concluded that further studies would be required to gauge the HADS test-retest reliability.

Herrman (1997), when comparing the English and German versions of HADS found the retest reliability to have a high correlation for both versions $r > 0.80$, after two weeks, and this figure decreased over time (2-6 weeks 0.73 Anxiety sub-scale and 0.76 Depression sub-scale). So Kline's suggestion of artificially inflated retest scores appearing in tests administered again less than three months from the first can be seen within this study, although both measures are above 0.70 and therefore considered to have test-retest reliability.

This critique identifies that studies and reviews, (e.g. Herrman, 1997; Michopoulos, et al., 2008; and Poole & Morgan, 2006) are repeating tests over a short time frame (less than 3 months) and could be producing, and consequently reporting, artificially high correlation scores when considering the recommendations made by Kline (1993). Overall evidence of appropriate test-retest reliability for the HADS does not appear to be consistent. There is evidence of inaccurate repeats producing artificially high scores and some evidence of test-retest reliability.

Inter-rater reliability.

Two or more raters can score an individual's response to a test at the same time. Inter-rater reliability is the degree of consistency in the score found between these raters. As the HADS is a self administered measure, there is no inter-rater reliability analysis needed. However, with the various recommendations for scoring within the HADS discussed earlier e.g. total scores; cut-off guides and separate scores, it could easily become confusing precisely what scoring would be most useful to various populations.

Summary of reliability.

Whilst the HADS shows to have good internal reliability, the test-retest reliability for the HADS has not been shown to be consistent over time. Consequently it is likely that the reported scores for retest validity are artificially high and inconclusive.

However, as the HADS is designed to assess mood disorder, this in itself is likely to be a labile construct and open to frequent change, so it is possible that test-retest reliability may be a more suitable measure for more stable constructs and not those within the HADS. Clearly there is evidence of good reliability although this is not consistent and therefore the HADS should not be relied upon when used outside of the recommendations given above.

Validity

Validity refers to whether a psychometric tool is measuring what it is supposed to measure. There are various ways of assessing test validity regarding the different types of validity, which relate to psychometric properties of measurements.

Hermann (1997), Hinz and Brahler (2010) and Bjelland, et al., (2002) found that psychometric studies of the HADS had only been conducted with small, specific clinical samples such as cancer patients and those with somatic illnesses and therefore conducted their own studies within the general population. Behavioural sciences do not produce complete models from which to evaluate measures of variables such as depression and anxiety. As such, measures such as the HADS have the potential to reflect error in the assessment instrument. However, to fully critique the HADS it is necessary to assess its validity.

Face validity.

Face validity adheres to a common sense understanding of the items and simply relating them to the purpose of the test, it relates to how the measure appears to the

participant taking the test. Therefore, a psychometric measure is said to possess face validity if it appears to measure what it attempts to measure. There are no studies looking solely at the face validity of the HADS. Due to the HADS being such a widely chosen measure, one would expect that face validity might be high and that it appears acceptable to most people taking it. It is clear from scanning the item structure of the HADS that the instructions are clear and straightforward informing the respondent the test has been designed to help the clinician know how they feel. The questions are short and the questionnaire is quick to complete. It may not be clear to respondents by scanning the item structure of the questions whether the items appear to be relevant to the constructs of depression and anxiety, see Table 8. The full HADS can be seen in Appendix G.

Table 8
Item structure of HADS

I feel tense or 'wound up'	I feel as if I am slowed down
I still enjoy the things I used to enjoy	I get a sort of frightened feeling like 'butterflies' in my stomach
I get a sort of frightened feeling as if something awful is about to happen	I have lost interest in my appearance
I can laugh and see the funny side of things	I feel restless as if I have to be on the move
Worrying thoughts go through my mind	I look forward with enjoyment to things
I feel cheerful	I get sudden feelings of panic
I can sit at ease and feel relaxed	I can enjoy a good book or radio or television programme

Overall, it appears that the HADS does possess reasonable face validity. Face validity, however, is a subjective analysis and lacks scientific support, and as such, other areas of the HADS validity must also be considered.

Concurrent validity.

Concurrent validity refers to the extent to which the psychometric measure correlates with previously validated measures of the same construct, that is, the extent to which the HADS correlates with other tests measuring the same constructs. It would be expected that the construct of depression would highly correlate with other measures for depression, and similarly so for the construct of anxiety when correlated with validated anxiety measures.

There is an array of potential instruments from which to assess depression and anxiety and these include: Beck's Depression Inventory (Beck, Steer, & Brown, 1996), Beck's Anxiety Index (Beck & Steer, 1993), The State-Trait Anxiety Inventory (STAI) (Spielberger, et al., 1983), Primary Care Evaluation of Mental Disorders (PRIME-MD) (Spitzer, et al., 1994), Centre for Epidemiological Studies Depression Scale (CES-D) and the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983). These measures all use self-report responses based on individual's experiences over the preceding days.

Research appears to show the HADS faring well in terms of concurrent validity when correlated with other self-report measures of anxiety and depression (e.g. Cameron, Crawford, Lawton, & Reid, 2008; and Quintana, et al., 2003). Quintana, et al., (2003) reported the concurrent validity of the HADS to be high with the (BDI) and the STAI, their results were statistically significant if $P < 0.05$. Moreover Bjelland, et al., (2002) reviewed HADS literature and found that the following measures; General Health Questionnaire (GHQ), the BDI and STAI had evidence of concurrent validity, despite the HADS having a lower number of items compared to these other measures. Their review of the range of correlations between these measures were:
HAD-D and BDI 0.62-0.73,

HADS-D and GHQ, 0.50-0.66,

HADS-A and STAI, 0.64 -0.81 and

HADS-A and GHQ, 0.50-0.68.

Bjelland, et al's, (2002) study does indicate that these correlations suggest that the HADS does possess good concurrent validity when compared with other measures of anxiety and depression.

Wilkinson and Barczak (1988) reported that the HADS performed better than the GHQ in identifying cases when compared with psychiatric assessment. Herrman's (1997) review suggested that when comparing HADS with the STAI and the BDI, various studies show moderate advantages of each of the measures when used with different medical patient groups such as general medical samples, cancer, rheumatology, cardiology, asthma & gastroenterology patients, (e.g. Ibbotson, Maguire, Selby, Priestman, & Wallace, 1994; and Meakin, 2006). Herrman claims that his review did not identify any self-rating scales as significantly better able to differentiate between anxiety and depression.

Other research reports favourable outcomes when assessing concurrent reliability (e.g. Cameron, et al., 2008; Crawford, Henry, Crombie, & Taylor, 2001; and Quintana, et al., 2003) there is evidence that the HADS does correlate with other measures and does possess good concurrent validity.

Predictive validity.

Kline (1993) states that the predictive validity of a test is its ability to make useful predictions. Assessing the predictive validity of the HADS involves correlating the test scores with a relevant variable at some time in the future. However there are no studies that have looked at the predictive validity of the HADS, although studies have included

analysis of the prediction value of the scales of the HADS for mortality rates, and the likelihood of future depression and anxiety.

When comparing the validity of the HADS with a structured clinical interview, researchers (Whelan-Goodinson, et al., 2009) did conclude that those participants with traumatic brain injury that obtained higher scores on the HADS were associated with a greater likelihood of depression and anxiety when compared to the findings of the structured interview, although they also found that the clinical diagnoses of anxiety and depression were not strongly correlated with those of the HADS. They found that the HADS was a dependable measure of emotional distress in their sample. Although they did not find the cut off scores and categories to be good predictors of caseness of anxiety or depression. This relationship, between the scores and the clinical interview, reflects the authors' original intention for the HADS, devised from clinical interview itself, to identify caseness, and not to be used as a diagnostic tool for clinical diagnosis. Furthermore, finding that the HADS was significant for measuring emotional distress appears to contribute further to the debate concerning its potential value as a single factor measure. Due to the debate concerning the varying factor structure of the HADS, ranging from one factor through to five factors, there has been an absence of research discussing the predictive validity of the HADS, particularly on those studies identifying factors outside the two identified by the authors (Zigmond & Snaith, 1983).

Research predicting one-year mortality risk in patients with acute coronary syndrome (Doyle, McGee, De La Harpe, Shelley, & Conroy, 2006) identified that the HADS-D scale successfully predicted an increased risk of one-year mortality in patients with ACS, this finding was also significant when controlling for age and gender. This study was conducted using both the HADS and the BDI; the BDI was not predictive of

this outcome. However they warn caution as their post hoc analysis showed no significant difference between the BDI and the HADS. Conversely, Silverstone (1994) found the HADS had a low positive predictive value in their study for depression, in both medical and psychiatric patients, and that it performed poorly when used for making diagnoses of major depression.

The HADS does seem to have some predictive validity in certain areas, although this appears to be limited and not consistent across studies.

Content validity.

Field (2009) suggests that content validity assesses whether the items on a questionnaire related to the construct being measured. Content validity can be assessed in part, by factor analysis. It is necessary to identify evidence that the content of the HADS corresponds to the content of the constructs of anxiety and depression that it was designed for. In other words, content validity refers to the extent to which the items of the HADS measure anxiety and depression.

There are potential difficulties with assessing the content validity of the HADS, for example, where a trait is difficult to define such as depression and anxiety, raters might judge the test separately and then compare ratings, those that are rated as highly relevant by both raters would confirm content validity. However, Mykeltun, et al. (2001) criticised the content validity of the HADS due to the absence of such controlled inter-rater studies of the similarities between the scales.

Zigmond and Snaith (1983) selected items that specifically reflected the two core constructs of depression and anxiety. Golden, et al., (2006) examined the performance of the HADS in identifying depression in patients with hepatitis C. Respondents had been clinically diagnosed with depression already using the DSM-IV criteria, and the

HADS-D scale had poor agreement with the clinical diagnosis of depression.

Furthermore, the HADS-A scale predicted depression as well as the depression sub scale. This suggests that the HADS does not possess good content validity.

Zigmond and Snaith (1983) claim that HADS was derived from clinical experience and not from factor analysis, unlike other scales. Moorey, et al., (1991) conducted a factor analysis on the HADS and confirmed a two-factor structure that was stable with the sub samples as well as the total sample. Factor analysis of the HADS has confirmed two reliable factors relating to anxiety and depression (e.g. Bjelland, et al., 2002; and Quintana, et al., 2003), yet other studies have reported that particular items do not cluster adequately onto just one construct (Johnston, Pollard, & Hennessy, 2000). Mykletun, et al., found that the anxiety and depression sub scales shared thirty percent of the variance. Lissper, et al's, (1997) study within a general population and Moorey, et al's, (1991) study with clinical patients, both found that item seven on the measure, 'I can sit at ease and feel relaxed', for example, does not discriminate between anxiety and depression. This casts further doubt about the HADS content validity. With many studies identifying from one to four factors (e.g. Bjelland, et al., 2002; and Cosco, et al., 2012) this makes the content validity even less clear.

Woolrich, et al., (2006) considered the use of HADS with patients with spinal injury and found that it showed 'promising content validity' (p88), calling for the need for further research in this field due to the lack of appropriate comparison measures. They did not use a control or comparison group in their study so it was not possible to ascertain whether any of the loadings in their factor analysis were specific to patients with spinal injuries or not. Conversely, Cameron, et al., (2008) found that factor

analysis identified both depression and anxiety consistently. Concluding that the HADS was a useful indicator of the possible presence of depression and anxiety.

It appears that the level of content validity of the HADS is not simple to conclude and despite many studies, there is little evidence that the test items are a representative sample of the construct, nor that the test items are appropriate to the content, not least because the construct of depression and anxiety are variable in terms of their definitions and assessments. So overall the content of the HADS cannot be said to correspond to the contents of anxiety and depression.

Construct validity.

A test needs to be correlated with other variables that it is likely to be associated with in order to demonstrate construct validity (Campbell & Fiske, 1959). If the HADS is to be an effective screening tool for the presence of anxiety and depression then it is essential that it does measure anxiety and depression. Zigmond and Snaith propose that the factor structures of the HADS are two distinct domains, depression and anxiety. Numerous factors are related to depression and anxiety and it is unlikely that one assessment would correlate highly with all of these. However, whilst recognising this limitation, the HADS-A should be able to successfully screen for patients with anxiety disorder, and likewise for the HADS-D. Conversely the HADS-D should not be able to screen for patients with anxiety disorder and vice versa, i.e. the HADS-A should be unable to screen patients for depression.

Razavi, Delvaux, Farvacques and Robaye (1990) suggested that the HADS scale was a single dimensional scale of mental distress. Similarly, Montazeri, et al., (2003) found a strong correlation between the Anxiety and Depression sub-scales suggesting the HADS may be more a generic measure of emotional distress rather than a measure

of the separate constructs of anxiety and depression. Hinz, et al., (2010) also confirmed that they found the use of the total score to be more reliable for those wanting to use the total score as a measure for mental stress. Conversely, Bjelland, et al., (2002) reviewed over 740 studies using the HADS. Using factor analysis they found that the majority of the studies they reviewed revealed two relatively independent dimensions of anxiety and depression. These dimensions were closely related to HADS-A and the HADS-D with a mean correlation coefficient of 0.56. This suggests that there is some overlap between the HADS' constructs of anxiety and depression and they suggested that the ideal cut-off scores varied between populations. Dunbar's (2000) study found a three-factor structure for the HADS consisting of Autonomic anxiety, Anhedonic Depression and Negative Affectivity. Dunbar found that the HADS-D subscale mapped well onto anhedonia, whilst the HADS-A sub scale produced mixed results between items.

When measuring construct validity by item-scale, Michopoulos, et al., (2008) found correlations ranging from 0.540 to 0.804 that were higher for each item with its factor, i.e. anxiety or depression. Mykeltun, et al., (2001) found that the HADS scale did not cover significant aspects of anxiety and depression, including significant constituents of depression (e.g. hopelessness and guilt). They indicated this may be why the HAD scale has such a reliable factor structure i.e. it focuses on a narrow concept of depression, preventing false-positive cases and may not be measuring true depression because of the omission of these components.

Carr and McNulty (2006) identify apprehension and anxiety as clinical features of depression. However, Dawkins, et al., (2006) identified a three-factor structure using factor analysis in a study in individuals with acquired brain injury, and found that the third factor did not map well onto anxiety or depression. Dawkins, et al., (2006)

identify a factor linked to some items that were neither anxiety nor depression. This implies that the HADS may lack specificity in detecting anxiety or depression with such a population. These findings support other studies that are suggesting the HADS' utility as a total score (e.g. Wilkinson & Barczak, 1988).

Overall the HADS research does not reflect Zigmond and Snaith's (1983) separate constructs of anxiety and depression, with suggestions of overlap between them within the measure. This inability to clearly discriminate these constructs indicates that the HADS does not possess good content validity

Summary of validity.

With the HADS possessing face and concurrent validity, but not strong predictive, content or construct validity, it suggests that the actual variables of depression and anxiety may be difficult to differentiate, as mentioned in the introduction and as such these measures clearly have shown that they have the potential to reflect error within the HADS.

Appropriate Norms

In order for interpretation to be carried out, either at an individual or group level, appropriate control group norms need to be reported within a test. As the HADS was designed as a screening tool for anxiety and depression, the manual contains cut off points for the presence of the mood disorders, but there are no norm tables provided.

Perhaps due to its ease of use and apparent simplicity, the HADS has established itself as a convenient self-rating tool for depression and anxiety; therefore, researchers (e.g. Bjelland, et al., 2002; and Herrman, 1997) have identified a need to develop norms for the HADS to use in other samples. To this extent other researchers such as Hinz and Brahler (2010) and Crawford, et al., (2001) devised their own studies to provide

normative values for the HADS for sectors of the general population. Various studies have recommended a wide variety of cut-off scores for the HADS scales with Bjelland, et al., (2002) identify 8+ as the cut-off within studies for both the HADS-A and HADS-D scales to indicate the presence of a mood disorder. Research (Aben, Verhey, Lousberg, Lodder, & Honig, 2001) has shown that the validity of the cut-off scores varies across different samples. Furthermore, they reported a misdiagnosis rate of twenty percent. As a result of this they suggest the HADS is not suitable for use as a diagnostic measure. In a study in 2009, Crawford, et al., (2009) aimed to produce percentile norms and accompanying interval estimates for self-report scales including the HADS. In the conclusion they call for a 'pooling' of normative data on the HADS to improve the validation of the current cut-off scores for self-report mood scales. They suggest that despite many studies regarding the HADS, there is still a gap in providing appropriate norms for the variety of both samples and cultures with which it is now used.

Conclusion

The psychometric properties of the HADS have been discussed within this chapter. It appears that overall reliability and validity are not confirmed, producing mixed results, for the use of the HADS to screen for anxiety and depression.

The HADS does appear to have good internal reliability but the findings of test-retest reliability within studies should be assessed with caution due to the absence of appropriately timed repeats of the tests, producing artificially high results.

The HADS also fares well when compared with other instruments designed to measure anxiety and depression, although examination of the content and construct validity of the HADS has shown that it does not possess strong reliability in these areas.

Indeed it shows high correlations between the constructs of anxiety and depression, which lend support to those studies recommending its use more as a measure of general emotional disturbance, although there is yet to be any confirmation of this as a construct. Cut-off scores similar to those originally suggested by the authors have been found to be useful in identifying caseness of anxiety and depression, but a lack of appropriate normative data renders these rather weak in their real value. Indeed, researchers who are using the total score as a measure of emotional disturbance are trying to develop a useful, generally accepted cut off score to use for assessing ‘caseness’ of anxiety and depression (Crawford, et al., 2001). It seems logical therefore, to assume that further research would be helpful to draw together the loose ends around the many studies of HADS on acceptable scoring and normative values. Although there seems little evidence to contradict that it is a popular measurement, there seems insufficient evidence to suggest that the HADS is a valid screening tool for anxiety and depression.

While the screening results might not guarantee a clinical diagnosis, indeed Zigmond and Snaith never intended it as such, the HADS is a practical psychometric tool that appears to provide a quick and impartial appraisal and suitable for using in a variety of settings before more thorough assessment is used. Despite being a widely used self-report psychometric tool, its structure still appears to lack clarity. This critique shares findings by Cosco, et al., (2012) suggesting that the ability of the HADS to assess the constructs of anxiety and depression is not clear. Despite the lack of theoretical and statistical clarity in the original HADS structure by Zigmond and Snaith (1983), studies across several sample populations (e.g. cancer patients (Singer, et al., 2009), homeless (Martin, Bonner, Brook, & Luscombe, 2006), stroke patients (Sagen, et

al., 2009), pregnant women (Karimova & Martin, 2007)), the absence of evidence of test-retest reliability, to the lack of consistency in the factor construct, the HADS continues to be widely used as an assessment tool. There has long been debate whether the HADS total score should be used as an indicator of general emotional distress (e.g. Razavi, et al., 1990; Zigmond & Snaith, 1983). Mainly because of the conflicting opinions about whether anxiety and depression are separate constructs. It appears that the HADS may be a useful scale to measure general emotional distress (Brennan, Worrall-Davies, McMillan, Gilbody, & House, 2010), but whether it should be used as a tool for assessing anxiety or depression, Cosco (2012) suggests using caution and the evidence in this critique concurs with this suggestion.

This chapter explored the HADS efficacy as a measure of anxiety and depression with clinical populations. The implications from the critique within this chapter suggest that the HADS would not be an appropriate measure to assess the wellbeing of crime analysts for some of the negative affects of working with traumatic material. However, it may be useful as an initial screening tool to identify the possible presence of emotional disturbance amongst those analysts exposed to traumatic material, and particularly if part of a longitudinal study as an ongoing measure, as the HADS has been identified as an effective measure over time.

The following chapter of this thesis aims to explore what mitigates and exacerbates the work of crime analysts within the criminal justice system who are exposed to other people's traumatic material. This is a qualitative study looking at subjective experiences of crime analysts which many previous studies have overlooked, and does not involve quantitative measures.

CHAPTER IV - RESEARCH STUDY

Exploring the work of crime analysts, employed by the criminal justice system, exposed to the traumatic material of others: protective and exacerbating factors.

Abstract

Research shows that staff working within the criminal justice system (CJS) are affected by the impact of working with first hand and secondary traumatic experiences of others. Studies have focussed on these individuals working in occupations that include emergency staff, front line employees, therapists, solicitors, judges and jurors. Despite similar professional exposure to the traumatic material of others, no studies have examined the impact of this upon analysts working within the CJS.

Addressing a gap in the literature, this paper reported a qualitative study examining the opinions of 12 crime analysts working in UK law enforcement agencies about their work with the traumatic material of others, and factors that helped or hindered them in this role.

Template analysis identified themes exploring their views on the impact, strategies employed, support used, responses to exposure, professional factors and training and technology, that contributed to how they managed their work with the traumatic material of others. Respondents reported pride and competence in their work. However, they may have been experiencing some secondary trauma symptoms of which they were unaware, although this was not measured directly in this study. For some respondents, the impact of their work was transferring to others close to them, such as their family and friends.

Broader organisational issues impacted upon how analysts experienced and managed their exposure to traumatic material. The work environment and excessive workloads had an impact on upon their effectiveness and ability to manage working with the traumatic material of others. Their accounts suggested that participants were taking an individual, self-taught approach to how they managed the impact of this in their lives and their workplace. The implications of this are discussed.

Introduction

Each occupation has its own set of challenges with its own complexities when it comes to workplace stress. This is not just a problem for the employee but also for the organisation that employs them. Understanding what leads to work stress can guide and inform the development of strategies and policies designed to optimise positive reactions to work, benefitting both staff and organisations. Considerable progress has been achieved recently in the study of workplace health, and associations between exposure to trauma and adverse health outcomes in particular (e.g. Anshel, 2000; Arnold, et al., 2005; Clausen, et al., 2011; Siegrist, 1996).

Given the many complications that are associated with this type of research on mental health, these achievements are impressive. However, a more detailed and analytical review of the literature regarding employees' exposure to trauma, currently reveals significant challenges facing researchers, including difficulties obtaining large enough sample sizes, reluctance of participants to talk about stressors, unsupportive work environments, the wide range of occupations exposed to the traumatic material of others and the absence of longitudinal studies of any effects (e.g. Alexander & Klein, 2001; Hatcher & Noakes, 2009; Kadambi & Truscott, 2004). Despite many of these studies focussing on staff working in various roles within the criminal justice system (CJS) such as judges and jurors (Bright & Goodman-Delahunty, 2006; Chamberlain & Miller, 2009), solicitors (Vrklevski & Franklin, 2008) and therapists working with both victims and offenders (e.g. Ben-Porat & Itzhaky, 2009; Deighton, et al., 2007) and police officers (e.g. Anshel, 2000; Burke & Paton, 2006; Colwell, 2005), no studies have examined the impact of this work upon crime analysts.

The Work of Crime Analysts

There are 43 police forces employing crime analysts in England and Wales and a number of agencies working across national boundaries in the UK, such as SOCA, employing crime and intelligence analysts experiencing exposure to the traumatic material of others through their work. For example, analysts employed within London Metropolitan Police, Serious Organised Crime Agency, West Mercia Police and the Serious Crime Analysis Section may undertake a wide range of tasks including comparative case analysis, tactical and strategic analyses, preparation of witness statements, giving evidence in court as well as developing intelligence packages on prolific offenders (Dr Jessica Woodhams, personal communication; <http://www.soca.gov.uk/about-soca/serious-crime-analysis-section>; <http://www.npia.police.uk> and (WMPA, 2011).

These analysts are required to analyse detailed information and this can include traumatic experiences of victims. It is possible that this work could have an impact upon their emotional experiences, both at a conscious and unconscious level, as seen in other studies with professionals working in the CJS (e.g. Chamberlain & Miller, 2009; Deighton, et al., 2007).

CJS Staff Exposed to the Traumatic Material of Others

Although studying serving police officers, Perez et al., (2010) and Krause (2009), researched psychological stress resulting from exposure to traumatic materials, as opposed to victims themselves, during investigations such as child pornography cases. They found that physical and emotional stress was reported that included intrusive thoughts, and feelings of social isolation about their work. Perez et al., (2010) found that burnout and emotional fatigue were correlated with the amount of time

forensic examiners spent examining disturbing images, indicating that this exposure leads to negative consequences for their health. Therefore, it could be predicted that some analysts might also be experiencing similar affects from their exposure to the traumatic material of others.

Research (e.g. Ferraro & Eoghan, 2005; Krause, 2009; Perez, et al., 2010) identified that police officers working in specialist roles (e.g. digital forensic examiner and forensic analyst), involving analysing crime-related information on digital media and viewing disturbing images, experienced a significant degree of stress that affected their lives beyond work. Krause, (2009) suggested that some police investigators working with high risk cases, such as child exploitation, failed to recognise changes taking place in themselves while they worked on particular projects, and that others experienced feelings of shame or helplessness about admitting they may have needed help. She suggested that prolonged exposure to such stressors could result in negative personal outcomes such as ill health, and to protect against this it was important to use external supports to identify these responses.

In the sphere of research itself, studies have questioned whether professional researchers are also affected by their work with vulnerable populations. These researchers are likely to be affected by their secondary exposure to the traumatic material of others (e.g. Coles & Mudaly, 2010; Dickson-Swift, James, Kippen, & Liamputtong, 2008). Furthermore, Beale, Cole, Hillege, McMaster and Nagy's review (2004) cited several authors that reported researchers were likely to experience physical and emotional symptoms of secondary traumatic stress as a result of information they were exposed to. Like qualitative researchers, many analysts within the criminal justice

system (CJS) also work closely with data from criminal investigations and their wellbeing might also be at risk as a result of this exposure

Many individuals employed across the CJS share secondary exposure to trauma through their work, such as jurors, solicitors and therapists (e.g. Bornstein, et al., 2005; Kadambi & Truscott, 2004; Vrkleviski & Franklin, 2008).

Coping with Secondary Exposure to the Traumatic Material Of Others Within the CJS

The way an individual attempts to deal with stress is referred to as coping (Folkman, et al., 1986). Lazarus and Folkman (1984) defined coping as behavioural and cognitive efforts that continually change to manage particular internal or external demands on a person that are assessed as difficult or beyond the abilities of the individual. Lazarus (2000) suggested that coping strategies can change, depending upon the type of stressor, with time and experience. Coping responses are influenced by both personal factors and the meaning of the actual stressor to the person (Anshel, 2000; Lazarus, 2000).

Therapists working with sexual violence victims identified helpful coping strategies when dealing with secondary exposure to victims' experiences. These strategies included: exercise, healthy lifestyle, getting support when required, being able to express their emotions and identifying positive ways to look at, and deal with, difficult situations that occurred in their work (Schauben & Frazier, 1995). Other research identified counsellors working within the CJS who coped well with secondary exposure to trauma, expressing satisfaction and feeling valued in their work (Bell, 2003). Digital forensic examiners, who examine images of crimes as photographs and videos, reported that prosocial coping skills, such as working harder than usual at home, distracting activities and talking to others were the most effective way of dealing with

stressful demands of their work (Holt & Kristie, 2011). Difficult work environments, such as those focussed on in this study, can be hard to cope with, Perez et al., (2010) identified that being able to separate home and work life could be a helpful way of coping.

Protective Factors that Meliorate Employees Secondary Exposure to The Traumatic Material Of Others

Identifying and understanding factors that meliorate effects of secondary trauma exposure will provide useful insight for staff exposed to this. Mindfulness, emotional awareness and anti avoidance strategies were implicit amongst trainee police officers who demonstrated effective ways of coping and mental health well being (Williams, et al., 2010). Heinrichs, Wagner, Schoch, Soravia, Hellhammer and Ehlert, (2005) suggested that coping skills training could be helpful to staff amongst high risk populations such as emergency service staff.

Personal psychotherapy, supervision and personal trauma history were related to trauma therapists that experienced positive personal development (Linley & Joseph, 2007). They identified that participants who reported having personal psychotherapy in the past, or were receiving it at the time of the study, reported more personal growth and positive changes and less burnout. Similarly, they found that therapists receiving formal supervision or support for their work as a therapist, and those with a personal trauma history, also reported greater levels of personal growth as a result of their work than therapists not receiving supervision. Law enforcement investigators who felt their work made a difference, and had supportive relationships, showed lower levels of secondary traumatic stress disorder and burnout (Perez, et al., 2010). Perez et al identified that those respondents whose loved ones were supportive of their work reported lower levels of STSD and exhaustion and also an increased level of professional efficiency.

Education, a manageable workload and competent supervision were identified as organisational factors that reduced various forms of secondary stress amongst therapists working with victims of family violence (Bell, et al., 2003). Feedback, support from colleagues and supervisors, and appropriate training (e.g. conflict management) provided evidence that appropriate organisational support enhanced positive engagement with work (Sulea, et al., 2012).

Being energised, motivated and effective at work were beliefs held by employees that were positively engaged in their work (Schaufeli & Bakker, 2004). Striving for professional achievement and showing engagement with work resulted in employees who were less likely to suffer negative consequences from their work (Hallberg, Johansson, & Schaufeli, 2007; Sulea, et al., 2012).

Sulea et al., (2012) suggested that both work environment, and personality variables, could explain how an individual would respond to stressors at work. A supportive work environment was thought to encourage employees to feel empowered and well motivated within their work (Wang & Lee, 2009).

Humour has been well established as a coping mechanism to assist police officers working with traumatic information and experiences (e.g. Follette, Polusny, & Milbeck, 1994; Haisch & Meyers, 2004; Sewell, 1994).

Peer support amongst police officers had a protective effect on symptoms resulting from work with trauma (Stephens & Long, 2000). Given evidence of the positive effects of personal or social coping (Ennis & Horne, 2003), professionals working with the traumatic material of others within the CJS may mitigate any potential effect through consistent support from those around them. Peer delivered support

programmes were highly correlated with good mental health amongst teams (Mulligan, Jones, & Woodhead, 2010).

Factors that Exacerbate Employees Secondary Exposure to The Traumatic Material Of Others

Although the field of mental health research has witnessed a significant interest in trauma and its effects, the recognition of the effects upon the professionals themselves has only followed more recently. Work stress and job dissatisfaction amongst those working within the CJS appeared to be related to physical illness, staff turnover, poor job performance and absenteeism (Anshel, 2000; Violanti, 2006). Studies showed that operational, front line staff experienced high levels of work stress that related to visiting scenes of crimes, working directly with victims of trauma, and being exposed to critical incidents (Alexander & Klein, 2001; Blau, 1994; Chamberlain & Miller, 2009; McCaslin, et al., 2006; Miller, 1995; Regehr, Hill, & Glancy, 2000).

An organisation's environment can affect the pursuit of goals amongst employees (Hyvonen, Feldt, Tolvanen, & Kinnunen, 2009). In Hyvonen, et al's study, employees with less favourable environments at work had strategies and goals that were more focussed on their personal well being or planning to leave the organisation. Concern about confidentiality and career prospects was identified amongst front line staff reporting high levels of psychopathology, burnout and stress symptoms as the reason they were reluctant to seek professional help with their symptoms (Alexander & Klein, 2001).

Organisational culture can be a significant source of stress and conflict to staff working with the extreme trauma of other people (Pross & Schweitzer, 2010). They found that structural shortcomings in an organisation were a significant source of stress and conflict where their staff were dealing with the extreme trauma of others. They identified that this could exacerbate stress to the point of vicarious trauma:

The results show that organizations with high stress and conflict levels exhibit considerable structural deficiencies and an atmosphere shaped by a re-enactment of the traumatic world of clients. This chaotic, unstructured, unpredictable environment parallels the total absence of structure that exists when a victim is at a perpetrator's disposal (p. 97).

They raised the question of whether employee stress symptoms could amount to a true diagnosis of secondary or vicarious traumatisation, because staff working in organisations that were able to transform and improve structurally, demonstrated a reduction in their symptoms.

According to Bell, Kulkarni and Dalton (2003), Ghahramanlou and Brodbeck (2000) and Pearlman and Mac Ian (1995), age and professional inexperience were linked with greater risk of developing secondary trauma and corresponded with higher levels of stress. Mental health workers who were younger or had less experience working with victims of the 11 September terrorist attack in America showed higher levels of secondary trauma than those that were not (Creamer & Liddle, 2005).

Implications

The idea that prolonged exposure to traumatic experiences can lead to psychological difficulties is not new (Figley, 1995; Saakvitne & Pearlman, 1996). Many staff working in the criminal justice system work repeatedly and specifically with the traumatic material of others concerning criminal justice issues. Often this work is at the very core of their professional roles, and as such is repeated over weeks, months and years. Research has shown that staff such as mental health therapists and social workers within the CJS do experience a variety of personal stress from exposure to traumatic or disturbing material within their roles (e.g. Chamberlain & Miller, 2009; Cheung & Boutte-Queen, 2000; Harrison & Westwood, 2009; Hatcher & Noakes, 2009; Kadambi & Truscott, 2004).

While academic debate continues on the ideal kind of support that should or should not be given to staff working with the traumatic material of others (Alexander & Klein, 2001; Arendt & Elkit, 2001; McCaslin, et al., 2006) the CJS needs to continue employing non front line staff to undertake this work. They need to make decisions that have an impact on how these staff deal with this (Chamberlain & Miller, 2009; Greenberg, Langston, Iversen, & Wessely, 2011). According to Barlow and Nock (2009) organisational managers often struggle to apply academic research to particular situations in the workplace and this often results in practices being promoted that are far from helpful to staff. It has been recognised that there are implications and responsibilities for organisations employing staff that have experienced trauma as a result of their work (e.g. Alexander & Klein, 2001; Bell, et al., 2003; HSE, 2000).

Summary and Objective

In summary, based on the research reviewed with other CJS workers, it is possible that exposure to other people's traumatic material could affect analysts in the undertaking of their daily work. However, there are few studies that recognise implications for staff who experience regular exposure to the traumatic material of others that includes interviews, images and experiences of other people's trauma. The challenges faced by analysts, who also work with traumatic information and material on a regular basis, has not been the subject of research.

This paper explored the impact of this upon analysts working in the CJS in the U.K. This research aimed to reduce the research-practice gap by providing a study that could be recognised for its practical application and that would be useful to both employees and organisations working within the CJS.

Method

Rationale and Context

The author's previous occupation involved personal exposure to images and written accounts of traumatic events such as multiple murders. They managed a team producing interactive media for use in court containing material that included post mortem and scene videos and photographs, audio recordings of people dying, and statements describing traumatic experiences in detail. Whilst recruiting for staff there were no assessments available within the organisation the author worked for to measure how a potential employee may respond to exposure to this material. Furthermore, there was no training or support offered either upon initial recruitment or during their employment to assist with their self understanding or protective strategies, or advising on the variety of responses that could occur from this work.

The author was curious about the differences between staff and how they would react differently to exposure to traumatic material. It was not possible to anticipate who would be able to work with this material and who may have difficulties. In the authors own experience they felt able to go home after work and continue with their home life and were not aware of any negative impact of this work, on the contrary they were proud of the achievements of their team. However, some individuals in the team did experience difficulties after exposure to certain traumatic material, whilst others never did and frequently expressed their job satisfaction. It was this difference between individuals and their reactions, this feeling as a manager of repeatedly 'wandering' into the unknown with this area of staff welfare that led to the author's academic interest in this field. The author wanted to explore areas that staff felt may protect or exacerbate the effects of this work upon them. Academic supervision by Dr Woodhams enhanced

this as she was previously employed as a crime analyst within a large law enforcement agency and shared experiences of this exposure to the traumatic material of others in the line of her work.

The authors' background will have led to potential bias in the concept of this research, as they had previously been exposed to traumatic material themselves. However, they hoped this enabled them to empathise with the participants and facilitated their understanding of their experiences. However, this empathy may have prejudiced the author's understanding of the participants' answers and it cannot be stated how different this study would have been without this prior experience. It is because of this experience that qualitative research was chosen for this study, allowing the exploration of opinions and thoughts of staff working in these areas of interest in depth, and to inform the questions the author wanted to further understand. This is discussed in the analysis section below.

Reliability

Qualitative methods are widely used and accepted within research, however there are questions regarding reliability and how this should be assessed within a qualitative study (Mays & Pope, 2000). Mays and Pope suggest that data collection and analysis procedures should be systematic with an audit trail facilitating the replication of each stage of the study. For example, the use of two researchers independently coding qualitative data and concurring on the nature of the codes and the data assessed ensures the level of reliability within the data being coded (Patton, 2005). For the purpose of this study, only one researcher coded the data in the template analysis due to availability and time constraints. However, it would have improved the reliability of the analysis had a second researcher independently coded the same data to develop the final coding template.

Participants

The 12 participants in this study were crime analysts working within various major crime units in the U.K. and had a variety of experiences in the job and different in length of service. According to Patton (2005), the number of participants in qualitative studies should reflect the purpose of the research and the study's feasibility. This was a qualitative exploration of exacerbating and protective factors of analysts' experiences of working with the traumatic material of others¹. It took six months to recruit sufficient respondents and although no figures were available, the occupation of crime analyst was considered sufficiently rare that a range of six to twelve participants for this study represented a healthy qualitative sample (Patton, 2005). There were no age, gender, location or fitness requirements specified.

The sample for this study was selected from analysts employed by six different law enforcement organisations, which included a mixture of urban and rural police forces, and national crime agencies. The time the participants had been working in the role of crime analyst ranged from three years to twenty years. Table 9 shows the demographic information of the participants. Gender breakdown for crime analysts employed nationally in this function was not available; therefore it is difficult to say how representative this sample is without more information. As this is a qualitative study using participants that were simply available and willing to participate, the study does not aim for replication and the results cannot be extrapolated, so the relevance of

¹ References to 'the traumatic material of others' will be abbreviated to 'TM' throughout the results section, the term 'analyst' will be inclusive of variations in analysts' job titles (e.g. 'crime analyst'; 'intelligence analyst'), unless otherwise specified.

gender breakdown for this particular study is arguably less important than the reason why they may have self selected.

Table 9
Demographics of participants

Description	Number
Gender	
Male	2
Female	10
Age	
20-29	4
30-39	5
40-49	2
50+	1
Job role	
Crime/Intelligence Analyst	10
Senior Crime Analyst	2

The term ‘traumatic material’ was briefly defined to participants during the semi structured interview (see Appendix D) and they were also asked what the term traumatic material meant to them personally. Participants were asked to estimate how much of their time working as a crime analyst they had spent exposed to the traumatic material of others (see Table 10).

Table 10
Percentage of exposure to TM during their career as an analyst

	Percentage of work time exposed to other people’s traumatic material						
	5-10%	11-20%	21-30%	31-40%	41-50%	61-70%	81-90%
Number of respondents	1	2	4	1	1	1	2

Participants reported working across a wide range of crimes from murder through to production and supply of controlled drugs. Table 11 shows their reported crime types in more detail.

Table 11
Types of crime with which participants work

Types of crime	
Category	Crime types
Offences against the person	Murder Death in custody Death in prison Serious woundings Rape Kidnap Domestic robberies Public protection
Road traffic offences	Serious road traffic collisions resulting in death
Offences against property	Volume crime Vehicle crime Burglary
Serious crime	Serious organised and cross border crime
Drug crime	Drugs production and supply

Participants worked in various fields but all within the process of the CJS and had a wide range of key responsibilities within their roles. Their own descriptions of their responsibilities can be seen in Table 12. These included analytical, briefing and presentation and miscellaneous categories.

Table 12
Examples of tasks described as key responsibilities

Key responsibilities described by respondents	
Type	Description of key responsibilities
Analytical	<p>Collating information from different sources, often quickly in first few days of enquiry</p> <p>Analysing evidence and intelligence in relation to the operation</p> <p>Providing intelligence assistance to investigations for various crimes</p> <p>Work with data such as statements, phone data, and automatic numberplate recognition (ANPR) data</p> <p>Comparative case analysis to see if crimes may be linked</p> <p>Analysis of victims' accounts of offence</p> <p>Provide evidential support to investigating team</p> <p>Managing processes and systems that are in place to manage crime groups</p> <p>Monitor emerging threats and serious organised crime that we are looking to target, reduce and detect.</p> <p>Co -ordination of organised crime group management</p> <p>Analyse data and prepare material for interviewing suspects</p> <p>Producing exhibits for court</p> <p>Inform and update senior investigating officers of relevant information to case</p>
Briefing and presentation	<p>Attend meetings, preparing notes</p> <p>Ensure data is jury friendly ready for presentation court</p> <p>Giving evidence in court</p>
Miscellaneous	<p>Manage other analysts</p> <p>Meeting timescales, governed by strict Crown Prosecution Service guidelines</p>

Procedure

Development of semi structured questionnaire.

Previous research with other CJS employees (Cheung & Boutte-Queen, 2000; Haeffel & Vargas, 2011; Harrison & Westwood, 2009; Hatcher & Noakes, 2009; Kadambi & Truscott, 2004; Williams, et al., 2010) used a variety of existing assessment

tools. This variety inhibited comparison between studies and participant types. Semi structured interviews were chosen for this paper to allow for in depth responses that lend themselves to qualitative analysis. They also provided a framework to ensure each interview covered the same broad themes whilst offering flexibility so that ideas developed could be explored as they emerged (Rudestam & Newton, 2007).

Due to the knowledge and previous experience of the author, the semi structured questionnaire was designed to explore analysts' opinions about this particular subject, i.e. what they felt could be protective to them in their work, and what they believed may exacerbate their exposure to other peoples traumatic material. The questions were designed from a combination of previous experience and research (Lavis, 2011).

The semi structured questionnaire for this study (Appendix D) incorporated demographic information, some 'warm up' questions about the types of crimes respondents worked upon and qualities they felt made good analysts. It then explored issues associated with analysts working with traumatic information. The warm up questions served to relax the interviewees and ease them into the interview (Willig, 2001), although they were not the focus of the analysis. The remaining questions were intended to be open, simple and efficient, allowing the respondents to talk about their thoughts in detail and depth, the final question gave respondents the opportunity to add any other thoughts or contributions to the study. This freedom also allowed for the interviewer to enquire into information that had not been included in the questionnaire, either because the interviewer had not thought about it, or had no prior knowledge. The same questions were asked of all participants, not always in the same order, and prompting as necessary.

Recruitment.

Analysts were recruited for the study using contacts known to the author and supervisor through law enforcement agencies. Invitations were sent to them through a senior manager at each agency, explaining the research aims and what would be involved (see Appendix B). They were invited to volunteer to participate in a semi-structured interview.

Telephone interviews were chosen, as it would be difficult to conduct interviews during work time without the analyst identifying themselves to their colleagues as a participant. The researcher was mindful that in the current economic climate of cuts in government spending (HMTreasury, 2010), analysts may be anxious about revealing private thoughts about their work. In a study of ambulance personnel, respondents expressed concerns about confidentiality and their career prospects when participating in research regarding the association between their mental health and occupational factors (Alexander & Klein, 2001). As response rates can be low amongst police staff in the UK, (e.g. Burrell & Bull, 2011; Jamel, Bull, & Sheridan, 2008; Weir & Bangs, 2007) it was important to be clear that participant's information would remain confidential and their identity would not be revealed in any way.

Those who wished to participate were sent a consent form to complete (Appendix C) giving their consent to take part in the research. Once this was completed participants were invited to make direct contact to arrange a convenient time to conduct the interview. Participants were contacted by telephone at times provided by them and the researcher recorded the interviews, sound only. Participants were able to ask questions before and at the time of the interview and were reminded they did not have to answer any questions they did not want to. They were informed that the interview was confidential and that they could withdraw at any time before submission of the

research. Interviews lasted between 60 and 90 minutes. All interviews were transcribed verbatim. Upon completion of the interviews participants were emailed a debriefing document (Appendix E) thanking them for participating, reminding them of the study benefits, how to withdraw and how to get help if they felt upset or distressed. All analysts were given the opportunity to request feedback and further information about the research at any time, and were also asked if they would like to review the coding template before final analysis.

Ethics

The STEM Ethics Committee of The University of Birmingham granted ethical approval for the study. All practices and documentation used in the process of inviting potential candidates to participate in this research were structured and approved according to University of Birmingham Ethics.

This research explored issues around areas of stress for participants, such as their personal experiences of working with the traumatic material of others, and there was the possibility that this could cause difficulties for some of them. Therefore participants were advised of how to access sources of support following their interviews should they require this. This information was included in the debrief information (Appendix E). As there may have been reluctance for participants to talk to ‘in house’ support both internal and external sources of support were provided.

Treatment of Data

The security of participants’ information and confidentiality was considered paramount and all data was kept confidential in a number of ways. The participants chose a unique identity code before the interviews began which they could use at any point to link to their data, they were informed of this from the start. Participants’ names

were not used. Interviews were transcribed immediately after each interview and when completed, any identifiers (e.g. names) were removed. Once transcribed, audio recordings were deleted, and transcripts and consent forms were stored in locked cabinets according to the Data Protection Act. The interviewees' unique identity codes were used to label the transcripts in case a participant wished to withdraw from the study, although no such requests were made.

In this paper, quotations were used to illustrate points; no reference was made to analysts by name or number. As this research was aimed at exploring the opinions and feelings of the participants, they were invited to comment upon the final coding template. A draft copy of the project was also sent to two analysts who were interested in reading it prior to finalisation. Originally, respondents were referred to within the manuscript by an allocated number. This was combined with care not to include any references from their account that would enable them to be identified. However, when some respondents were reviewing the final coding template and draft research write up they were trying to link some of the quotes with the allocated respondent number to try to identify the originator. Although done in good spirits, the numbers were subsequently removed from the quotes to remove this possibility as it became clear that specific quotes when linked to the same identifying number had the potential to allow colleagues to identify each other. For this reason no further copies of the draft were sent to participants. As there were only two male participants and two senior analysts, no identifying information was included in the results section that would lead to individual data being recognisable from any of these participants.

Analysis

Template analysis.

Template analysis (TA) was chosen for this study because it offers flexibility with fewer procedures than other qualitative forms of analysis; this allows the researcher to tailor it to the study's requirements (King, 2004). One of the main priorities in a qualitative study is to have a well organised strategy that makes sense of the data and communicates it clearly; TA supports this with the organisation and analysis of textual data according to themes (Rudestam & Newton, 2007). King (2008) found that TA worked well with applied research, where he suggested, that other forms of qualitative analysis require starting with a blank slate (*tabular rasa*) and the discovery of a model. In contrast, TA is practical according to King, allowing the researcher to start research with an idea already in mind, starting with preconceived 'a priori' ideas that are led by the research aims, or theoretically led for the starting point, and then combining these with a bottom up interpretive approach for further coding.

TA begins with a number of predetermined themes called 'a priori' themes. They are themes that have been identified by the researcher before analysing, or in some cases collecting, the data. A priori themes can be sourced in a variety of ways including the researchers' own experience and ideas, or for example, ideas and theories from related research. TA begins with looking for instances of some thematic idea that transcends the first, looking for chunks of text that capture a theme or overlapping themes (King, 2008). Transcripts should be in the standard format for analysis (e.g. wide margins, double spaced). From this point, a template of codes is developed and applied to the first few transcripts. Then second level codes can be developed which can

be refined or deleted as analysis continues. According to King, as the template is modified the researcher should be going back to the transcripts with the new codes. Further codes and levels can be developed to capture the aims of the research until a final coding template is achieved. With an emphasis on hierarchical coding with sub themes, template analysis encourages as many levels as the researcher feels is relevant, allowing the researcher to focus on areas they wish to capture in depth (King & Horrocks, 2011). See Figure 2 for diagram of the process.

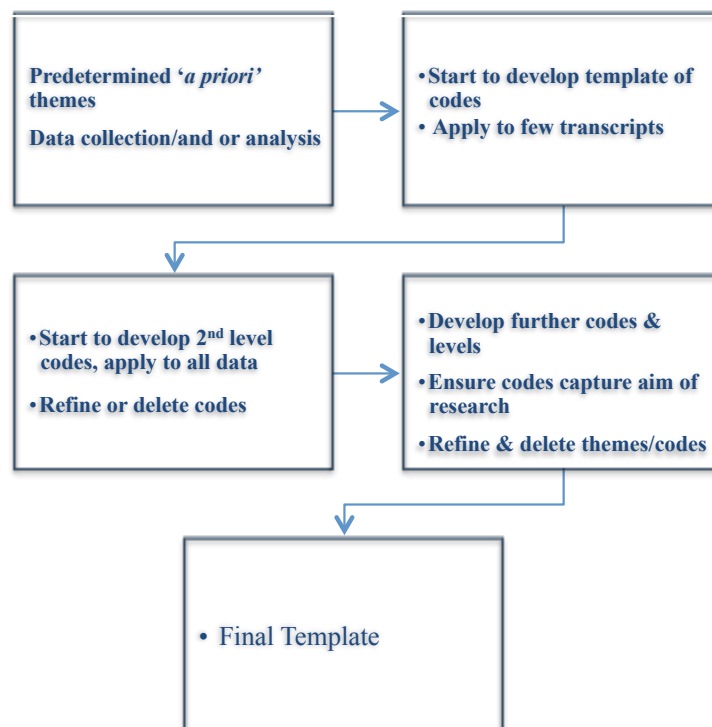


Figure 2
Thematic analysis process

TA is focussed on a template, the template ‘is a tool to tell the story of the data and the researchers engagement with it’. It is about how the researcher needs to use the coding to address their research question (King, 2008). Most templates vary according to the complexity and depth of the data, although two to four levels of code are usual. This is an approach that encourages open ended data, as there will be themes and areas not covered by the current research that may be explored at some future point.

Interpretive Phenomenological Analysis (IPA) and Thematic Analysis require analysing data to ascertain levels and themes (Braun & Clarke, 2006; Smith, 2003); this would not allow the open exploration that is possible with TA. Grounded Theory (GT) and IPA require a 'bottom up' approach to qualitative analysis, exploring the data to identify what themes are present (Crabtree & Miller, 1999; King, 2008). IPA is more concerned with nature and lived experience of participation and brings these together to see if there are some common themes (King & Horrocks, 2011). TA, whilst starting with two or three *a priori* themes in advance, has the flexibility to then analyse bottom up in a similar way to GT or IPA, highlighting themes of interest to the research, starting with a template, instead of producing a template after analysis. TA maintains the potential for the researcher to go back and revise *a priori* themes if necessary.

Template analysis development in current study.

Template analysis was employed to analyse the accounts produced in the semi-structured interviews in this study and allowed the comparison of the different perspectives offered by the respondents. Initially, two first level (superordinate) *a priori* themes were selected, 'protective' and 'exacerbating', as the aims of the research were to look at factors that protected or exacerbated working with the traumatic material of others. Also, second level *a priori* themes selected were, 'strengths', 'support', 'vulnerabilities', 'strategies' and 'symptoms.' The transcribed interviews were read and reread and memos and reflective notes were made (Rudestam & Newton, 2007). The transcripts were coded according to evolving themes that were allowed to develop as they appeared in the transcripts. This approach was applied to each transcript, introducing new themes as they arose and then re applying these themes to all transcripts as suggested by King et al., (2004). The first level *a priori* codes were

retained, however, the second level *a priori* codes were refined and amended and as the analysis progressed through all the cases, more ideas emerged. A point was reached when there was an ever decreasing amount of data that could not be indexed on the template. The resulting themes were then refined by a variety of methods including merging or moving some from one level to another, and in some cases deleting them (e.g. some *a priori* themes were removed) and the final template code can be seen in Appendix F. Descriptive accounts of the themes are discussed in the results and discussion section.

Once the final template was completed, having been applied to the twelve cases (transcripts), it was sent to the participants for their thoughts and feedback. As this study aimed to reflect experiences of analysts, the best judge of the template would be those who were interviewed, and this was the rationale behind sharing the template with the participants of the study. Responses were general in nature and none made suggestions for altering the template. They reported they felt it reflected their experience well. However, there was some specific feedback in response to a particular strategy (in the dissociation theme). This feedback was included in the results and discussion section as it allowed a deeper exploration of these analysts' experiences and provided clearer insight into the variation between individuals taking part in the study. Furthermore, this feedback gave the analysts the opportunity to actively participate in the development of the analysis. Cross case description was used for this study, to reduce the chance of recognition of participants, and also to enable the application of concepts and theory to the themes and codes from the final template. This analysis facilitated the exploration of the data gathered that helped to explain its meaning and comparing the perspectives of the analysts (King & Horrocks, 2011).

Results and Discussion

This study reported key findings from semi-structured interviews with analysts working in the CJS, exploring protective and exacerbating factors of working with other people's traumatic material and how this was managed within a sample of 12 analysts. This section presented the themes alongside illustrative quotes and discussion relating the themes to other research with CJS professionals and considered the implications. Figure 3 shows the superordinate (first level) themes from the final template. The full coding template (Appendix F) shows all of the codes and levels within this study and sections are highlighted where relevant using figures based on the sections shown within Figure 3.



Figure 3.
Superordinate themes

Relevant themes included those which were protective and assisted analysts contending with difficulties with their work with TM, and related to factors that were likely to have a helpful impact on upon this work. White et al., (2008) questions which psychological characteristics enable some people to adapt better than others after exposure to TM. This study identified personal growth; feeling valued; getting support; supervision; professionalism; analysts feeling they made a difference and identifying positive ways to look at, and deal with difficult situations at work, as factors that helped with their work with TM. These factors were also found to have positive outcomes for

others working with TM in previous research (Bell, et al., 2003; Linley & Joseph, 2007; Perez, et al., 2010). Such characteristics can be part of the construct of resilience, where resilience refers to how people react and adapt to traumatic experiences (Richardson, 2002). Seligman and Csikszentmihalyi (2000) regard this as a framework of positive psychology that enables the identification of qualities that help individuals do well in difficult situations.

Themes also included factors that related to interviewees' opinions on factors that they felt could exacerbate their work with TM, and influence whether they were more likely to have difficulties from the impact of working with TM. Examples of these themes included work stress; increased workload; absence of strategies for dealing with the traumatic material of others; intrusive thoughts; social isolation outside of work and limiting social activities, these themes are reflected in the final coding template (Appendix F). Similar examples were also identified in other studies (Snyder, et al., 2006). Some of these negative impacts were shown to 'ripple' out from the analysts to those close to them at home. These included examples where respondents were restricting children's activities because of concerns of harm, and advising family members and friends to change plans because of their thoughts related to potential risk as a result of their 'insider knowledge.' These characteristics have previously been linked in research to reducing the strength and resilience of individuals working with TM, in some cases leading to outcomes that have included secondary trauma, burnout and poor job performance (Anshel, 2000; Perez, et al., 2010; Violanti, 2006).

Psychological processes including the failure to cope effectively and the development of maladaptive coping styles, resulting in an inability to appraise and respond effectively with stressful events, appear to be implicated in this downward trajectory of outcomes

for these employees. Maladaptive coping strategies such as limiting social activities, are unhealthy strategies relied upon to relieve their stress and included other themes seen in this study (e.g. dissociation and isolation). Such coping strategies may appear to have short term effectiveness, however they can all have a long term negative impact on physical and psychological well being (Alexander, 2002).

1. Strategies.

‘Strategies’ was one of five first level themes in this study (see Figure 4).

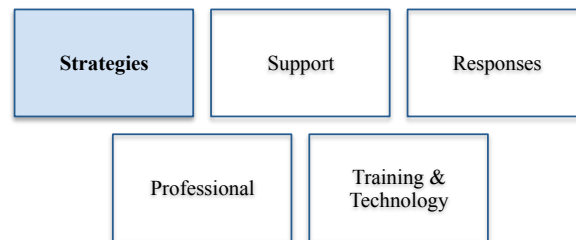


Figure 4.

Strategies, as part of five superordinate themes

This was quite a large theme, and contained three second level themes, ‘cognitive’, ‘behavioural’ and ‘absence of strategies’ (see Figure 5), and thirteen third level themes that provided clarity and allowed in depth discussion. This study identified strategies that participants reported to have developed, possessed or learned during their career working specifically with TM that they called upon to help cope with their exposure to TM. Research looking at resilience within criminal justice workers has identified the positive effects of personal or social coping strategies (Ennis & Horne, 2003; Williams, et al., 2010). Themes identified in this study showed that some participants were employing coping strategies, for example, sharing feelings and concerns with colleagues. Despite all participants acknowledging that they worked with TM, some appeared unaware of the strategies that they employed to cope with working

with it until being asked to consciously consider this in the interview, as one analyst said:

“It's all subconscious to be honest, I mean until now, sort of, and I've just started talking about it. You realise a lot of it is just a natural process you know, not something I started really giving a great deal of thought to. Talking about it you realise a lot of it is almost done on auto pilot and you know you don't really have to think about doing it”

Another analyst simply responded:

“I don't have a strategy that I intentionally use”

Whilst professional education and training in emotional wellbeing can be helpful (Ciarrochi & Blackledge, 2006), eleven respondents in this study mentioned that they were employing self-taught strategies. None of the twelve respondents reported receiving training specifically in emotional well-being or being aware of its availability. One respondent did report being taught a technique by professional support at work to clear their mind of unpleasant thoughts about a particular experience.

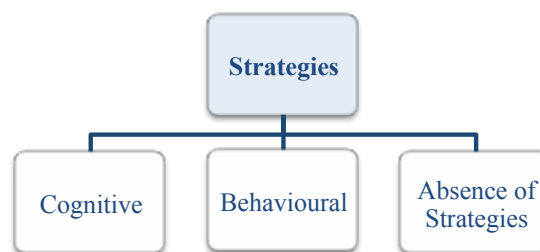


Figure 5.
Strategies, second level themes

1.1 Cognitive.

Cognitive strategies declared were a means of the respondents coping with secondary exposure to traumatic material. A number of these strategies could be independently utilised by the analysts, and would not be affected by organisational restrictions or other pressures. In other words, analysts had the choice whether or not to

employ these as strategies to help themselves. The third level themes can be seen in Figure 6 and are discussed below.

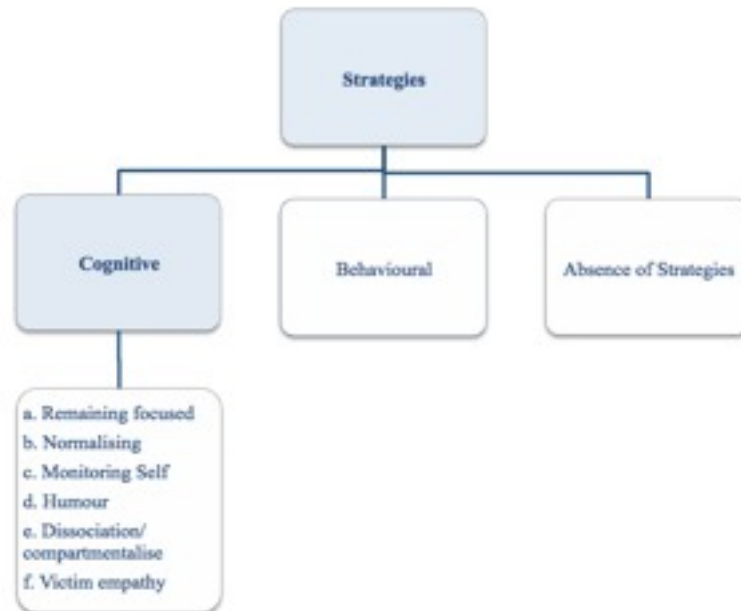


Figure 6.
Cognitive strategies, third level themes

1.1a. Remaining focussed.

This sub theme included those analysts that found it a beneficial strategy to focus on the work in hand.

“Identify something that’s either going to reduce crime or get a detection against the offender to prevent them doing something else, then that’s my focus really”

“I look at it as more a motivating factor if you can see something that’s clearly been traumatic on the individual, or groups of individuals..... so I think for me it’s just taking out the emotion of it and sort of reusing it as a driving force”

Being a parent or holding another role, such as a pet owner, was reported as reducing the ability of analysts to remain focussed when working with specific types of crime, making them more personal. For example:

“It crosses a boundary when you link it [TM] to something that is personal to you”

”It’s always worse when you’re looking at female sex offenders, as a mother. It’s even harder to believe as a mother who has carried a child, given birth to a child, that you would consider doing that to a child”

“If you gave me pictures of animals being starved to death now it would really upset me”

Van Patten and Burke’s (2001) study found that working with child victims had a significant affect on investigators who were parents, they experienced problems maintaining a protective distance from the subject, and the examples given by respondents in this study indicated similar experiences.

When giving feedback on the final coding template for this study, one analyst expressed her own feelings about this theme, and an element of ‘self-sacrifice’ in her response:

“I know we discussed this factor and that I felt, personally, since I have become a mother I would find it very difficult to work for a prolonged period of time on a crime or crimes that involved children. Whilst I would not volunteer for such work, if I was required to perform the role of an analyst on a job of this nature, I would not refuse to be involved in the investigation, but felt that, I as an individual, would have difficulty in coping with this sort of work. Being a mother should not exclude an analyst from being considered for a job, I am aware of two analysts that are mothers who have been more than willing to assist in investigation where unpleasant evidence has been present and have managed to emotionally detach themselves from their work, they have both been driven to professionally present their work because they are mothers”

1.1b. Normalising.

Working with TM produces a variety of emotions and responses, naturally analysts wanted to ascertain that how they responded was ‘normal’ and consistent with the responses of colleagues in similar situations. As one respondent said:

“I suppose it comes back to that whole seeking reassurance of, you know, ‘Am I normal?’

1.1c. Monitoring self, limits on exposure to the traumatic material of others.

Some cognitive strategies reported were dependent upon the individual being given the opportunity by the organisation to employ them. For example, setting boundaries on working with TM is only going to be a feasible strategy if the analyst has the opportunity to do something else for a period of time. A couple of examples included suggestions about recognising the need for taking breaks:

“speak to friends and have a brief break from the material’

“Recognise how you feel, take time out and get up, walk about, go and make some space, and some tea for the team!”

1.1d. Humour.

Several respondents in this study said they used humour as a coping strategy for working with TM, sharing this strategy with police officers exposed to similar situations (Follette, et al., 1994; Haisch & Meyers, 2004; Sewell, 1994). However, some respondents appeared hesitant to share this strategy that helped working with the more difficult aspects of working with TM. Its use was evident in different ways, for example, as a way to help cope with difficult work:

“Without sounding weird, a twisted sense of humour, because sometimes the best way of getting through some of the things we deal with is by making what others would perhaps see as inappropriate jokes’

“..people well, inject humour into awful situations, but it’s kind of a coping mechanism”

Another way of using humour was to protect against the reality of TM:

“It helps to have a bit of a joke, you’ve got to make light, otherwise you’d be pulling your hair out with what’s happened to some people”

As a way of lightening the weight of serious work in general:

“It’s very jokey, it sounds awful but you’ve got to have a very good sense of humour to work in the field, it’s a very light hearted environment, they’re serious in terms of their work that they do, but when we are interacting with each other we don’t take anything too seriously”

1.1e. Dissociation & compartmentalisation

Research has identified that being able to emotionally separate and disengage from TM is a benefit to police investigators (Violanti, 1992; Violanti & Gehrke, 2004). However, Bryant, Moulds and Guthrie (2001) suggested that dissociation whilst working with TM could leave individuals at greater risk of post traumatic stress disorder. Several analysts described being able to dissociate feelings from TM as a protective strategy. This could be at work by picturing themselves somewhere else, for example, or purposely controlling and separating their emotions from the actual TM:

“A lot of the work we deal with is of a very sensitive nature, so to a certain extent you kind of have to detach, distance yourself from it when amongst friends and in a social setting”

“I know it [TM] was real, but my job is somewhere else and is a small cog in a big wheel of an investigation”

“I try not to analyse that side of it because if you actually sit down and think about it then that’s when things start affecting you”

Other analysts described needing to put a ‘protective barrier’ between themselves and the TM to defend their emotions:

“I have to adopt a professional approach I suppose and I’ve got to put some kind of wall between me and the material”

“somehow you’ve got to put something between you and what you’re dealing with so that you’re not driven by it. If other people tell me stories, or if a sad song comes on TV that’s it, I just blub, but give me the harsh reality of what I do and I’m not bothered”

One analyst suggested a strategy to help was likening working with TM to reading a story:

“It’s like reading a story, you don’t really sit and think that this is a real person, this is someone’s life”

Being able to dissociate appeared to be a helpful strategy for coping with TM. Many analysts in this study mentioned compartmentalising their feelings when working with TM, and that this was a helpful strategy, again pointedly containing their emotions.

“I think you’ve got to be able to compartmentalise emotionally quite well, put work in its box and life outside of the box”

Another analyst said:

“I genuinely know I’m not awake at night worrying. It’s almost as if that’s my work, and I come home and I leave that at work”

Having work-home boundaries highlighted the importance of consciously leaving work with TM behind when going home:

“So there’s that part of it where you have a choice whether to switch off. I’ve managed to separate home life and work relatively easily over the last few years”

Some respondents found a successful strategy was to imagine that the TM was some form of fiction, so it became ‘unreal.’ When thinking about such strategies one analyst imagined it as some sort of film:

“I try to think it’s almost like a virtual experience so you wouldn’t, you shouldn’t be meeting the people involved, you can kind of see it like you are watching a film”

And another as a television programme:

“I guess that it’s not real, that it’s more like if you watched it on television or something like that”

This was a strategy that involved not seeing the victims as real people. When the final coding template (Appendix F) was circulated around the respondents for their comments, this theme generated discussion and prompted several to elaborate on their strategies further including this response:

“As analysts we all have to deal with real life situations, however unpleasant they may be and I feel that there is a significant difference with emotionally detaching yourself from the unpleasant facts of a particular crime/situation whilst dealing with those facts in a professional manner. I feel that pretending that those facts are in some way not real perhaps lessens the importance that is attached to presenting a professional analytical product. It is the belief that the crime is real, however unpleasant the circumstance, that gives you the drive and focus to professionally deal with the information with the aim of bringing offender(s) to justice and succeeding in a successful prosecution”

This demonstrated how people really differed in their application of coping strategies.

1.1f. Victim empathy.

Rothschild and Rand (2006) suggested empathy was the capacity to experience what others experienced. This theme showed that some analysts empathised positively with the victims in their work, and this ability to empathise provided some professional motivation.

“the thing that instantly springs to mind is the image of [victim] on the slab having a post mortem, and the fact that it was an elderly person with no dignity, you know they were a piece of meat. It’s that kind of thing that shouldn’t happen, it was an old person, it was a horrible way to die. We’re now seeing them in a way that they [the victim] would never have wanted us to see them, so the empathy is there, but I don’t get emotional about it”

Stamm (1997) claimed there was an emotional cost to people indirectly exposed to the experiences of victims of traumatic events, themes suggested that some respondents discussed being changed in some way by their exposure to TM, and this

included empathising with the victims. For example, the way work had changed for one analyst made the material much more real, bringing it to life and resulting in more empathy with the victims:

“ Now I would say that 80% of the time we are working off a victim video interview. Obviously, you are seeing the victims give their evidence and what happened to her which is a very different ball game from reading it”

This reflected some analysts’ accounts of not seeing victims in their casework as being real people. When faced with a victim in court some found that this focussed them on the reality that they are real people:

“I had to go to court earlier this year to give evidence, I met one of the victims, it was different, a little bit upsetting because you, you just forget that these are real people”

Another analyst had a similar experience to report; finding the experience in court focussed the reality of working with TM:

“I met a victims mother [in court], it was a little bit upsetting because you, I think you just forget that these are real people”

1.2 Behavioural.

Behavioural strategies were active measures that analysts could either engage in away from work or were adopted within work, and were examples of positive steps they were taking to manage working with TM. There were six sub themes (Figure 7). Analysts described ways in which they made a particular effort to leave work at work and avoid TM work intruding at home.

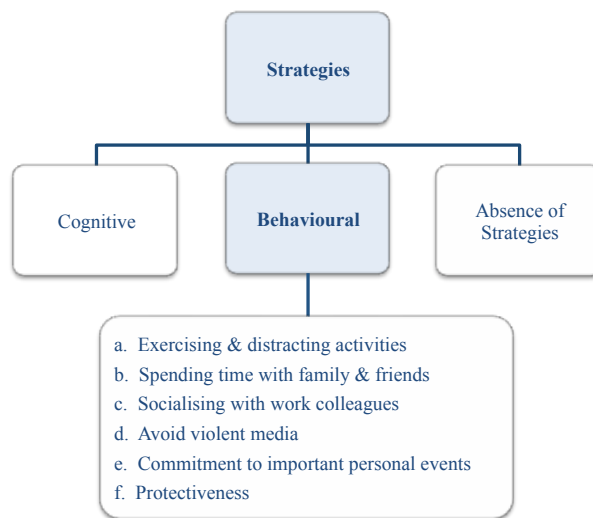


Figure 7.
Behavioural strategies, third level themes

1.2a. Exercise and distracting activities.

Exercise and leisure activities, as cited by a few respondents in this study, were found to be strong predictors of perceived good health and coping well with work related stress (Iwasaki, et al., 2005). No formal assessment measures of well being were conducted in this study and responses are purely self-report.

“Twenty minutes on the treadmill and I’m too tired too think about it”

Another analyst identified other ways to take their mind off working with TM:

“If I’ve got something [TM] playing on my mind I will throw myself into cleaning bathrooms or doing the ironing”

1.2b. Spending time with family and friends.

Spending time with family and friends was mentioned as playing an important role in helping the participants cope with working with TM.

“When I come home my life is my child and the world that I have, or you know going out with friends”

“You know at the end of the day you’ve got to draw the line somewhere and there are some things [friends] that are more important than work”

Conversely some responses reflected a belief that the world was not a safe place, for example, mistrusting other people, concern about being alone when out, limiting social activities, being protective to themselves. Woody (2005) found that similar themes also resulted in social isolation where individuals only socialised and felt comfortable with their co-workers. According to some participants, they had difficulty separating personal and professional lives and this intruded on their personal activities:

“I think I have a heightened awareness of it [risk of crime] and you know I would lean more towards leaving the car in a very well lit area and not going on my own after certain times”

All of the respondents declared heightened vigilance, distrust and suspicion towards others:

“When my friends are talking about scouts and cubs, I’m thinking ‘no don’t go there, it’s full of paedophiles’. One lady said to me ‘you know everyone is CV checked now’ and I’m like, I’m in my head thinking, yes but that’s only telling you about people we know about”

“Only my close neighbours that I am friends with and trust know who I work for, you know, go three or four doors away from my house and they don’t know what I do. And I will even deny it if they suggested it. My one neighbour who is about four doors down one day said, oh don’t you work for the police? I was like, ‘No’”

“I question everybody and I don’t trust people. It’s not a good trait is it? It’s not something I should be proud of. I mean that’s the way I look at it, it’s all about reducing a risk”

1.2c. Socialising with work colleagues.

This was a popular strategy where analysts reported the benefits of going out away from work, with colleagues.

“I’ve made friends and obviously the police force go out drinking quite a lot, so there are a lot of social outings”

No respondents reported socialising with friends or family as a strategy to help with their work with TM. Some respondents did report limiting their social activities to protect themselves from perceived risk when out (see 1.2f below).

1.2d. Avoid violent media.

This strategy appeared to help attempts to keep work separate from home life and protect against intruding thoughts.

“I will look at scene photographs, not a problem. I cannot watch a horror movie even if you paid me”

“I don’t watch movies or read books about sexual offences because I don’t want my personal life to interact with my work life more than necessary”

1.2e. Commitment to important personal events.

Striking the right balance between work and home life was suggested as a strategy that helped manage working with TM.

“My friends and family are very understanding, that’s my job at the end of the day, but I would never miss something at home that was important to me”

1.2f. Protectiveness.

This theme related to issues that included respondents being highly vigilant in their private lives with their ‘inside knowledge’, and factors that sometimes lead them to having difficulty separating work from home life, and the impact this had on them and those around them. Limiting social activities as a protective factor to themselves was the result of feeling more aware of the risks that were ‘out there’:

“I wouldn’t say it’s affected me hugely, except that it’s harder to make friends and meet new people that it was before. I think it’s back to the perceived risk, I think you see people you don’t know and you kind of, you weigh them up a little bit and you wonder what kind of person they are and maybe just a lot more suspicious perhaps than I used to be”

”my work has affected how I feel about people I don’t know, strangers, especially men. It’s making me have much more negative thoughts about that, and meeting people, and you know walking outside alone, and drinking, there’s quite a few there!”

Some respondents declared protectiveness to their family and friends. Analysts with children described having more concerns about their safety away from the home and the potential for harm to come to them:

“ It gets to the stage where my child is invited to somebody’s house and I don’t allow it because they are 12, I don’t allow sleepovers because I am automatically thinking, well I don’t know that there isn’t a paedophile in that house”

The impact of this awareness could be transferred onto other people as a result of their exposure to the analyst, for example:

“I’m a bit more concerned for them (family) to the extent like, not just like victims, but even saying to my brothers, if a girl is drunk, even if she’s coming on to you, don’t do anything because you never know what will happen, you never know you’ll be accused, so I think I’m a little bit more concerned for them”

“If you ask my daughter she would say she doesn’t like me doing the job that I do, because I am extremely over protective in where I allow her to go and what I allow her to do”

“I said to my sister ‘I don’t want you going there’, you know, obviously young attractive girl out on the town, nasty young man who might want to attack her”

“Those kind of worries, I need to keep her [relative] away from there because there is somebody out there, I supposed it’s more the sexual crimes than the violent crimes”

“I’ve been into somebody else’s circle of friends, identified a behaviour I’m not happy with, that I can see risks in, and I’ve pulled my family out and not gone there again”

The impact of working with TM for these analysts clearly does not stop with them. Some respondents in this study were expressing behaviours as a result of their

work with TM that impacted on the lives of those around them, their children, neighbours, family and friends.

These factors were the result of analysts being exposed to the TM itself and its' wider affect

“You’re so much heightened through your work that when you’re out and about in your social life you are actually spotting things and looking for things and thinking that person doesn’t look quite right, or there is something about his or her behaviour that doesn’t ring true”

A ‘ripple effect’ can be seen where a symptom is proximal, having an immediate effect upon the analyst and then, in some cases, having an impact on other people, effectively transferring out to them and impacting upon their lives too. It appeared that some of the emotions experienced by the respondents had been transferred on to other people simply because of their own proximity to them.

1.3 Absence of strategies to deal with TM.

The third second level theme under the ‘Strategy’ was ‘Absence of Strategies’ (see Figure 8).

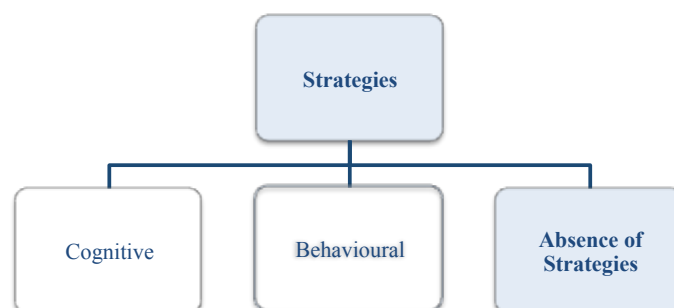


Figure 8.
Absence of Strategies

Krause (2009) identified that some police investigators failed to recognise that changes can take place within themselves as a result of their work with the traumatic material of others, and that others feel shame or helplessness about admitting that they needed help. Respondents in this study reported enjoying their work and were not openly aware of a negative impact of their work with TM, or they were not reporting it. The themes identifying the presence of negative effects of their work eluded most respondents as they got on with their work. Some analysts reported an absence of strategies for coping or dealing with TM, either because they had never thought about it, or because they did not believe they needed strategies for this.

“In terms of traumatic stuff, that I find difficult, I don’t know how I cope, I really don’t know how I cope with doing it”

“I don’t know if I have any strategies, it [TM] has never bothered me, times that I’ve been there it’s never bothered me, I’m not aware of thinking ‘I must do this now to stop this disturbing me’

“It’s either a wake up call, you go or you deal with it [TM], I don’t know how you erect that wall but you got to have something”

However, anxiety about certain types of work was expressed by some of the respondents where they declared feeling anxious when thinking about how they would cope with the TM.

“If a big job came in like a paedophile ring, I really don’t know how I would deal with it because I don’t think it would upset me in that I wouldn’t be able to do the work or go off sick or anything like that cos I think I would go in and I would treat it similar to any other job. But I think the material itself I would find that difficult to leave at work, I think that would perhaps play on my mind a bit more when I got home because those are the kind of stories in the paper I just choose not to read”

Coping skills training, mindfulness, emotional awareness and anti avoidance strategies have all been shown as effective ways of coping with working with traumatic

material (Heinrichs, et al., 2005; Williams, et al., 2010). Respondents in this study have disclosed their use of these strategies, although their awareness of them was not disclosed.

2. Support

Support was one of the original *a priori* superordinate themes that maintained its presence in the template from the outset (see Figure 9).

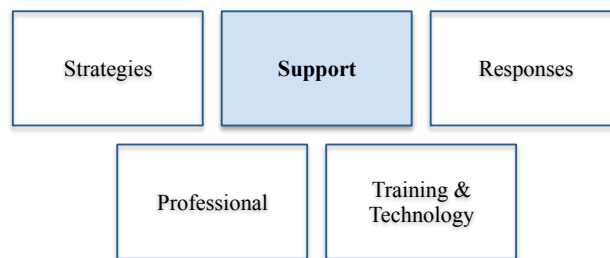


Figure 9.
Support, as part of five superordinate themes

Krause (2009) suggested that prolonged exposure to TM may result in negative personal outcomes such as ill health, and to protect against this it was important to use external supports to identify these responses. Respondents in this study reported being able to discuss their feelings with others and found this supportive and helpful when coping with TM. Respondents shared experiencing this benefit with participants of a study by Ennis and Horne (2003) which suggested professionals could minimise the impact of working with the traumatic material of others through consistent support from

those around them. This group had three sub themes (Figure 10) and explored support that respondents suggested was helpful to them when working with TM.

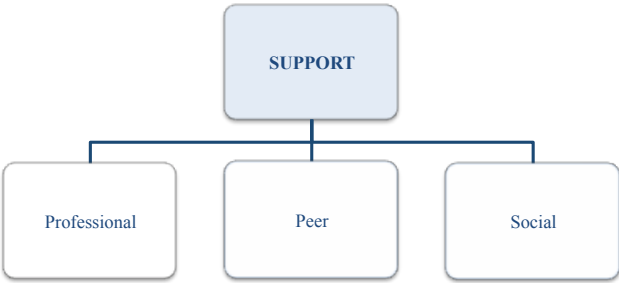


Figure 10.
Support, second level themes

2.1 Professional support.

Greenberg et al., (2011) suggested that in order to be successful, professional support (see Figure 11) in the workplace should be perceived as beneficial and meeting the needs of those for which it is intended, employees and employers. Some respondents in the current study were suggesting that they did not want to use any professional support with working with TM, a reluctance to seek professional support was also identified amongst police officers work with traumatic material by Woody (2005). Some analysts also disclosed that there was not any available to them or that they did not think it would be of any help to them.

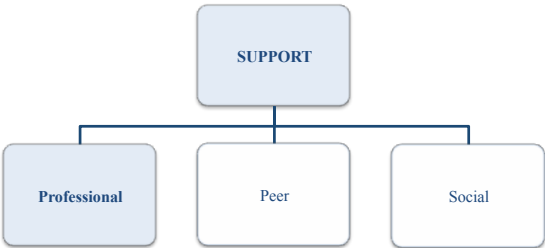


Figure 11.
Support, professional theme

Only two respondents mentioned utilising professional psychology or counselling services to discuss the impact of their work with the traumatic material of others. One of whom was very amenable to the process, although when asked if it helped, they admitted it did not and that they would prefer to talk to colleagues:

“It’s a woman who does it usually, and she just has a couple of set questions that you have to answer like, ‘Are you drinking more, are you sleeping ok?’, things like that. But then she’d just ask what issues you had going on in your head, you can talk about anything you want which I found was quite interesting. Didn’t really help me though, to be honest because I’m a bit of a chatterbox anyway. I felt like I was going in for a chat with somebody, which is nice, but like I say, I don’t bottle stuff up anyway really, so I didn’t get any particular benefit from it”

However, several analysts could recall other staff utilising some form of professional support. One analyst recalled being taught a helpful technique from professional support services at their place of work:

“I know this is going to sound silly, like imagining all this pain and trauma is a big black cloak and then just letting the wind slowly lift it up and push it away and then out of the window and away from where we are. I know it’s quite simple and a bit twee but it really seems to work”

This highlighted that very few of the respondents reported feeling benefits from professional support.

When professional support was available some respondents mentioned that they would not use it, and did not care that it was available. This included times where analysts were aware of formal professional support routes available to them but did not want to use them to help with dealing with their experiences of working with TM. This could be a reflection on the culture around them, for example, when talking about dealing with TM and not wanting to use professional support, one respondent said:

“We didn’t have counselling before, we didn’t have those debriefs before, so I’m a bit old fashioned I suppose, I wouldn’t go”

Another said that:

“In our organisation there is a kind of department set up for giving you that assistance but I think if someone was being traumatised by it [TM] then they really ought to think about changing positions because its not going to get any better, if anything it’s going to get worse”

It seemed this related more to those analysts who simply did not want to use any support offered to them, that they ‘would get on with it.’ Blaue (1994) suggested stress amongst law enforcement staff was cumulative and given the nature of the work of analysts in this study, they could be affected by stress symptoms and not benefiting from stress management programmes or training.

Some analysts reported that they were not aware of any professional support available to them.

“With critical incident debriefing, that’s quite a new thing, that’s quite a new thought process isn’t it... I’ve noticed that in some of the jobs I’ve worked on that some of the officers have been offered those kinds of counselling a lot, but it’s not offered to everybody. It’s only offered to the people who are immediately affected by the offence, it’s not offered to us”

Another analyst referred to a time when support was not available to them:

“I remember the DCI said to me at the time, ‘there is some really horrible pieces in that are you going to be okay?’, I thought the work needed to be done. But I never spoke to anyone about it. I never. I didn’t have the option then, they didn’t have Critical Incident Debriefing or anything like that you just, read it, wrote it down, and you dealt with it.”

Others were unaware of any professional support being available now:

“I wouldn’t know if there was anything like that [support] available, I don’t think there is. Nothing has been volunteered to us in my time here”

One analyst mentioned what might be helpful for working with TM:

“We’ve never covered it before, how to deal with something that we’d see as traumatic and I think a lot of people, myself included, might not recognise it as being traumatic and what effect it might have on us. We think we’re alright at the time and some kind of guidance if you’re in that situation. Where you can go, who you can speak to, and what to expect and for somebody to say ‘it’s OK, you can have these feelings, you’re not on your own, expect to see, expect to feel, these kind of feelings at some point’. Because we are dealing with some traumatic things and there’s been some horrendous incidents, I think. To try and prepare us would be better than not saying anything and hope we can deal with it in our own way”

Some analysts suggested they would not use professional support because they did not think they needed it, even though a service was available.

“I’ve never been to see them [professional service] for anything like that cos I’ve never been affected by that material, but I know our colleagues who work in child abuse, they have to have compulsory counselling”

“I’ve never been to see them [occupational health] because I’ve never been affected by that material. There was talk about us having compulsory counselling but that’s gone out of the window”

One analyst said:

“I think it [support] should be compulsory because people often think they don’t need it because it has a stigma attached, they should routinely go like some police officers doing certain roles have to go whether they think they need it or not”

2.2 Peer support.

Peer support (see Figure 12) emerged as a strong theme, assisting analysts in their ability to manage working with TM.

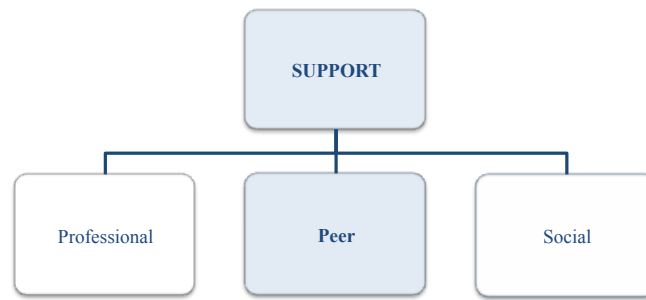


Figure 12.
Support, peer theme

All analysts described occasions when they had talked about specific work with colleagues. Sharing and talking about details on specific jobs with colleagues demonstrates a level of trust and understanding between team members. This trust was appreciated and valued by the participants:

“It does help an awful lot to have people around you that have looked at the same thing and you can talk about it with them, even if it is to say, ‘God how bad is that, can you imagine?’”

“.. cos you can’t understand why a person would murder a number of people for no apparent reason. But you discuss those sorts of things with the colleagues that you’re working with that are closely working on that operation rather than anybody else”

The importance of the team, getting support and working with like minded colleagues, together with the quality of the team were all indicators of analysts feeling supported and the benefits of peer group social strengths. One analyst described their peers as the only people who could understand the issues:

“You can confide in your colleagues and talk about things in a lot more detail than you probably would at home or with your friends and family. Because I think they are the only ones that truly understand what you’re doing”

Given the nature of work undertaken by analysts, there were obvious restrictions about what and with whom they could talk about this. Feelings of restriction in relation

to their work environment and circumstances seemed to impact negatively on some analysts.

“You’re a bit limited because you work in a small office, because the information we work with has to be kept quite tight. So you’re working in quite small social circles at work really, and even then you can’t talk to even the people in the next office. You can’t tell them what you’re doing so it limits what you can actually talk to them about really”

“You can’t even talk to the people in the next office, you can’t tell them what you’re doing”

Ennis and Horne (2003) found that staff with greater feelings of peer support were likely to display lower levels of distress and symptoms as a result of working with the traumatic material of others. Feeling an emotional connectedness between colleagues appeared consistently within all respondents. Analysts reported strong feelings of trust with their colleagues, particularly in relation to jobs where they shared their exposure to TM, and the fact that they were not always able to talk about this to others outside the team.

“..one [crime] that’s a little bit more upsetting than the others, then we just kind of discuss it in the office, we all know what we’re reading and how we can share our thoughts and feelings, so it’s like an open forum”

Several studies have identified high correlations between peer delivered support and good mental health (e.g. Ennis & Horne, 2003; Mulligan, et al., 2010). The response was consistent in relation to peer support being beneficial amongst this study’s respondents.

2.3 Social support.

Krause (2009) highlighted the value of utilising social supports (see Figure 13) to identify any negative responses as a result of prolonged exposure to the traumatic material of others.

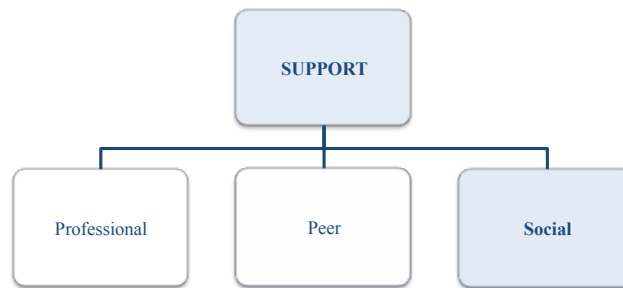


Figure 13.
Support, social theme

Respondents specifically referred to the benefits of support from partners who were also employed within the CJS. Such partners were found to be helpful, as they could understand many of the same difficulties experienced by the analysts, and offer a relevant perspective or specific advice (Burns, 2007).

“My partner does the same work, so I’ve got somebody here I can talk to about my work, who would understand it”

However, a few respondents mentioned feelings of isolation due to the response of friends and family in relation to an analyst’s work with TM:

“I guess you can bore yourself going home and talking about work. Because you have to understand it and they don’t necessarily understand things, so what’s interesting to you isn’t to them. So I have been told to shut up a few times”

“I certainly couldn’t come home and tell my partner of the gory details of what I’d seen”

No respondents referred to work related support from non-CJS working partners or friends and family in this study.

3. Responses to Working with TM

This study did not measure whether participants were experiencing vicarious trauma or burnout, but these themes were indicators of vicarious trauma in previous

research (e.g. McCann & Pearlman, 1990) and included physical and emotional responses reported by respondents. This was not one of the original *a priori* themes and emerged during analysis of the data to be one of the five superordinate themes (see Figure 14).

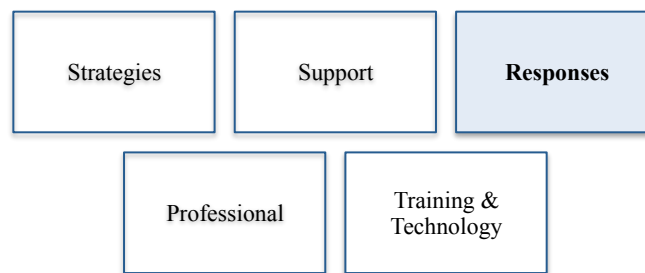


Figure 14.
Responses, as part of five superordinate themes

From analysts' reports, themes emerged that were similar to symptoms of both vicarious trauma and burnout as described in previous research (e.g. Jenkins & Baird, 2002; Maslach & Leiter, 2008). Some respondents reported feeling emotionally drained, angry, being in a bad mood and irritable as a result of their work with TM. Exhaustion can also indicate burnout (Maslach & Schaufeli, 1993). Fatigue and stress with work were reported in this study at the same time as analysts still feeling very engaged with their work, which paralleled the findings of Timms, Brough and Graham (2012) who identified that employees could be burnt-out but still engaged in their work.

"I love my job, but I don't always manage my stress well, I can get so tired, and I can be a bit bad tempered. So there is a negative effect on my close family I would say"

"I will have my thoughts on those people, and some have really angered me or I find things frustrating"

"My partner gets the brunt of it at home when I've dealt with difficult material"

Besides emotional responses to their work, other analysts related physical responses they experienced as a direct result of working with TM, for example:

“I was still breastfeeding my child at the time and my milk dried up. The emotional affect on me was quite great”

Some analysts recalled crying as a result of their work with TM, one example:

“There have been a couple of times when you are reading where I’ve had a physical experience of getting upset and crying, and all of a sudden being aware of tears coming down my face”

Intrusive thoughts

Studies by Perez et al., (2010) and Krause (2009) identified that some staff exposed to the traumatic material of others, on cases such as child pornography, experienced physical and emotional stress that included intrusive thoughts outside of work. Respondents reported a variety of responses in relation to intrusive thoughts. Some analysts described deliberately trying to stop thoughts about TM as a strategy to help cope with it.

“My main strategy, I would say, is first of all, when you are working with it [TM] try and not think too hard about it”

“If you are letting your emotions get involved and thinking about it [TM] all the time, then you’re not going to be as focussed on what you are doing”

There were also occasions when TM intruded into some respondents’ thoughts and were unwanted. Although our study was not designed to measure the symptoms of trauma in our participants, intrusive thoughts did emerge as a theme. One analyst reported having such thoughts about material they had read and seen about a murder:

“ It was when I started reading it and thinking ‘God this is awful.’ It sticks in your head and I’ll never forget it. I’ll never forget what I read and what I had to write. There is nothing you can do, you can’t change it. You can’t make it right, you can’t make it different. It was pretty horrible”

A feeling of having to ‘deal’ with TM as part of their work and ‘getting on with it’ could be seen throughout the analysts’ responses. However on some occasions they reported having difficulty switching off from TM:

“Something you keep playing over in your mind, it’s not pleasant what you’ve seen and you can’t really get rid of that thought or image or whatever it is”

Some respondents were unable to switch off from their work with TM and found this difficult and unpleasant. Staff working in child exploitation units have also been reported as having similar intrusive thoughts as a negative result of their work (Burns, 2007). The phenomenon of being changed as a result of exposure to another person’s traumatic material, vicarious traumatisation, (McCann & Pearlman, 1990) could be a hazard of the work of an analyst.

4. Professional

This theme highlighted both protective and exacerbating professional elements of their work with TM and related to how the analysts felt about their job and reflected analysts who were positively engaged in their work. It was the fourth of the five superordinate themes (see Figure 15)



Figure 15.
Professional, as part of five superordinate themes

Similar findings have identified that employees who persevered with their work and were organised and conscientious, were more likely to be engaged in their work and willing to put in extra effort, and feel energetic, dedicated and absorbed in their work (Sulea, et al., 2012). However, there were also similarities between this study and the findings of Pross and Schweitzer (2010). Pross and Schweitzer identified structural shortcomings as a source of work related stress and conflict where staff were working with the trauma of others. Frustrations with the system, other people lacking understanding and not feeling utilised properly all fell within these themes. Brown and Campbell (1990) studied over 1000 police officers in the UK and reported that organisational and management themes such as these were more stressful than front line duties (that included repeated exposure to traumatic material of others). Template analysis highlighted that respondents in this study were being exposed to similar professional stress and conflict as those in other studies as a result of negative organisational impacts upon them (e.g. Stephens & Long, 2000). This could exacerbate their ability to focus on positive ways of working with TM. For example, Hyvonen et al., (2009) identified that staff in less favourable work environments were more likely to be focussing on concerns regarding their personal well being, or planning to leave the organisation rather than focussing on their job. There were three second level themes in this category (see Figure 16).

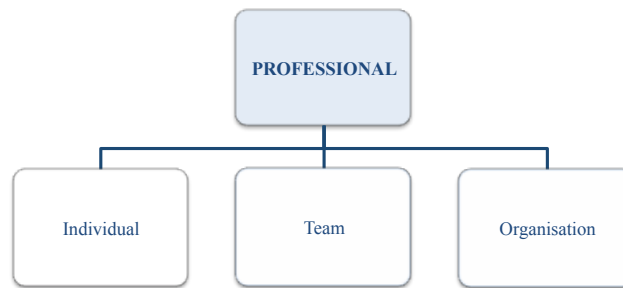


Figure 16.

Professional second level themes

Participants described enjoying their work and valued being able to make a difference, they expressed its’ meaningfulness to them, and a feeling of pride.

“I really enjoy the job I do and certainly enjoy the type of work that I get involved with. I’m proud of some of the work we get involved with so I can say it’s only positive”

4.1 Individual

There were five third level themes underneath the professional, individual thread (see Figure 17).

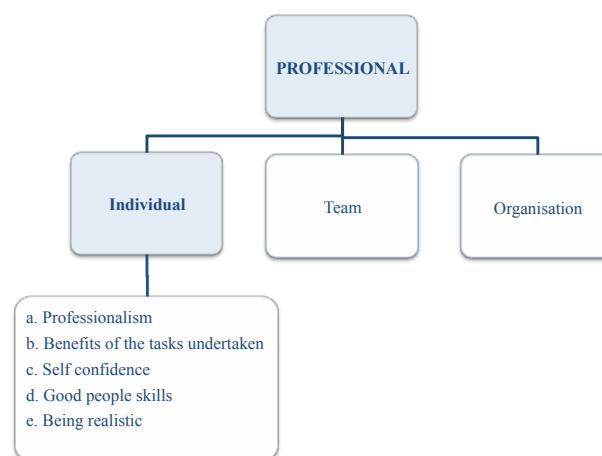


Figure 17.

Professional, individual third level themes

4.1a Professionalism

Professionalism appeared as a theme where some analysts had chosen to focus on satisfying the needs of others at the expense of their own needs. They did this to do what they believed was right or to avoid feeling guilty or selfish or even to maintain a connection with team members who they perceived as needing them. This can involve a sense of over responsibility for others where the person is meeting the needs of others but at the same time believes their own needs are not getting met (Young, Klosko, & Weishaar, 2003). Young et al., suggested these employees appeared on the surface to be happy with this self-sacrifice but were really feeling a sense of emotional deprivation. Some of the respondents shared similar feelings, as though their own needs were also unmet.

“Before working with the police I could not watch a horror movie, and I still can’t. But if as part of my role I need to look at scene photography, post mortem photography, that isn’t a problem because that is my job and that’s what I am there to do, and there is a purpose for you looking at that scene”

Cancelled arrangements made with family and friends also appeared as a form of professionalism where an analyst would report changing personal plans to meet the needs of the job.

“There have been times when I’ve ended up cancelling leave to go in because I’ve just got so much work to do, there are times when you know you can’t go home, the job is there to be done, the briefing is at ten o’clock at night and you’ve got to go and do your bit. Going for a meal on a Friday night, there have been quite a few occasions where I’ve had to ring and say I’m sorry I can’t make it”

4.1b Benefits of the tasks undertaken.

These were personal factors reported by the respondents that helped them work effectively in their role, that motivated them to carry on with working with TM and

reflected their state of mind, the fact that they were doing something positive and believed they made the world a safer place. Some respondents mentioned that believing tasks undertaken in their role as an analyst resulted in justice, and that their ‘inside knowledge’ was of benefit to themselves, helped them working with TM. The following quotes demonstrated a protective element to their awareness:

“It positively gives you more knowledge, so you’re more aware of the environment around you, so less likely to be a victim”

“I wouldn’t pick a fight in a pub if I didn’t know the person cos you think, what might they be capable of based on the things you’ve seen and heard at work”

There were examples related to feeling empowered and having faith that their current work results in justice:

“We had the people in the dock, and from the evidence we already gathered they’ve been charged and found guilty. Seeing that, you just thought, ‘Well, you really just don’t want them to get away with it’ so you know it is incredibly motivating”

“Most of the murders I’ve worked on they’ve found the right person and then they have been charged. So there is a kind of a resolution there isn’t there?”

“I absolutely enjoy my job and I can’t imagine doing anything else now and to go into work every day with the possibility that you’re going to help somebody, be it a victim or SIO [senior investigating officer], well, ultimately it’s always going to be a victim”

“you’ve got to do your best to get justice, and that’s the bit that makes it all worthwhile, without sounding a bit cliché and corny”

Conversely, personal emotions such as feeling professionally helpless contributed to stress levels and psychological wellbeing (Burns, 2007), analysts in this study discussed the feeling of not being able to help enough:

“Sometimes I find myself thinking, ‘It’s just got to be here somewhere and I’m not finding it’, a number of times I’ve been into [name]’s office for a shoulder to cry on, literally because I want to help protect other victims”

There was a feeling of negativity about some analysts’ image of themselves, reflecting a feeling that the tasks undertaken in their role as an analyst had a negative effect on them.

“I’d like to go back to those early years [before working as crime analyst], they were much happier days, I suppose if I was honest it [analyst work] has had a negative impact on how I view things now”

4.1c Self confidence

Developing confidence and feeling self confident, together with having a positive self image, were strengths that helped participants cope with their work:

“In the past you’d wait for the senior investigating officer to tell you what to do and you’d go with that, but certainly for me, over time, you get a bit more experienced and you kind of know how to hit the ground running more.”

“You are expected to speak out at the briefing or go along to meetings, and give evidence in court, it builds up your confidence quite a lot when you have to deal with it”

4.1d Good people skills.

These were qualities that made an effective analyst, being personable and a team player.

“You need good people skills, we’re dealing with people up and down the chain of command”

“We don’t deal with the general public but we’ve got a lot of people coming to us and relying on us to give them the information they need, so you’ve got to be quite personable”

4.1e Being realistic about role as crime analyst.

This theme included the value of having a realistic understanding about the work of an analyst, and what the work involved. Some respondents suggested that the job of an analyst could be misunderstood as a result of watching the media:

“Some people’s perception is that it’s all exciting and think it is too much CSI and stuff like that, it is mundane, you’re doing the same thing all the time”

Another indicated the importance of being realistic about the role of an analyst in the wider field of their work:

“You’ve got to know your place in the big wheel. Whilst I think we have an important role, at the end of the day we are there as a support member of staff and supporting an awful lot of people”

Being realistic about what the work might involve was also introduced:

“You’re going into a team that deals with murder, you’d be quite naive to think that you’re not going to be dealing with any of the nastiness that goes with murder. So I think you are a certain type of person to be there in the first place, you’ve got to have a certain mind, a certain interest in that kind of thing to have even considered going and working there at all”

Another analyst reported relating to the reality that the data was showing the experience of the victim by following the information about what happened during the incident in question:

“It’s only an interpretation, you could look at all the data and see exactly where the murder happened, clearly this person’s alive here, happy, going about their daily life and then bump, it’s gone because of this other person”

Being curious, combined with an awareness of the reality of working with other people’s traumatic experiences emerged as helpful in their work:

“ You’ve still got that repulsion of what they’ve done but you are kind of interested in it”

“It’s never bothered me and I suppose I have a kind of morbid curiosity about it and how it’s happened, why and when it happened and all that kind of stuff”

“I know it’s somebody who’s died in a very horrible way, I find it quite fascinating, looking at them [scene photographs], I hope this doesn’t make me sound like some kind of weirdo, but I really don’t know how to explain it”

Expressions of the reality of some of the tasks undertaken were made:

“A completely innocent party involved at the wrong place, wrong time, and have met their end in really, really sad circumstances. It’s the kind of statements that are made by their friends, their parents, the people left behind, it’s so sobering”

Some participants talked about being aware of the reality of what goes on in the real world as a result of their work as an analyst exposed to TM, and reported cynicism within this:

“I started this work quite naive and rose tinted glasses, and you know, this lovely happy bubbly world that was in my head. In the last few years I’ve become quite cynical and quite aware of the kind of harsh reality of life I suppose”

Negative factors linked to mistrust (see 1.2b and f), cynicism and an increased awareness of the reality of what goes on in the real world were evident amongst the respondents. Cynicism and feeling less professionally effective than in the past were both reported and could also be signs of burnout (Maslach & Leiter, 2008). Participants were unanimous in declaring an absence of symptoms from their exposure to TM.

4.2 Team.

The ‘team’ emerged as a theme throughout the data and divided into two third level themes (see Figure 18).

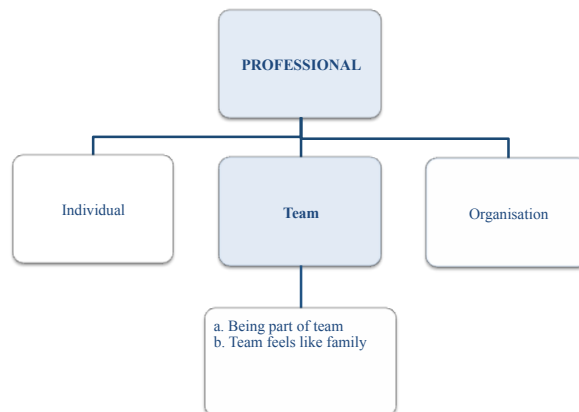


Figure 18.
Professional, Team, third level themes

4.2a *Being part of team.*

The benefits of being part of a team and co worker support were apparent:

“I think your colleagues definitely influence that way you feel about work, I mean I’m definitely happier to do work when we’re all busier, we do struggle, yeah it’s ridiculous, we struggle, and we’ve all got so much [work] and we’re just all very supportive to each other. I feel like my current team, I’ve never felt that before, that kind of level of support, it’s a good thing you know”

“I love my work, I love my job. I think it’s fair I actually find it rewarding to solve problems and give something to the team that I’m working with, be able to help them and make a difference”

Some analysts reported not feeling as much enjoyment in their work or career as they had done in the past.

“It’s a different world now to what it was a few years ago. I would go all out for certain people, you know work until four in the morning, but now I say, ‘I’ve got too much work on, I really can’t’, it’s when appreciation turned to expectation for nothing”

4.2b *Team feels like family.*

Analysts referred to their colleagues as ‘being like family’ and relating positive aspects of this to mitigating their work with TM.

“I’ve been with them [team] for such a long time now that they’re almost like a second family”

“Very much a family environment at work”

Although some respondents expressed feeling isolated within the work environment because they were the only analyst in their team, or one of a just a few working in a team:

“I would definitely say that support from the analyst’s side of thing could be a lot better, there are a lot of times when I think, ‘well I’m on my own here’ and I’m sort of looking after myself and my own development because I know it’s not going to come from anywhere else”

4.3 Organisation.

The organisation that employed the respondents appeared as both helping and hindering with their work with TM in a variety of ways. There were six third level themes that can be seen in Figure 19.

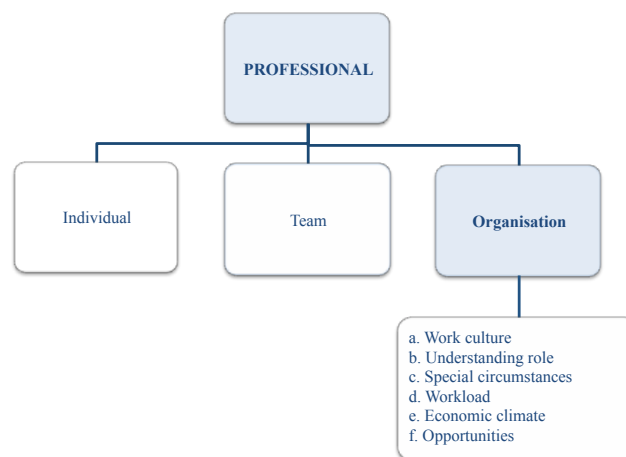


Figure 19.
Professional, Organisation, third level themes

Analysts were readily able to reflect on positive aspects of their work with TM and how organisational variables had a positive impact upon them. Wang and Lee (Wang & Lee, 2009) discussed the value of such a positive work environment, suggesting it could enable employees to feel empowered and well motivated. Themes

indicating the presence of a positive work environment were evident in this study. For example, whilst the organisation's ability to manage workloads appropriately and understand the needs of analysts might not directly help them with TM, if an analysts' workload is managed effectively, and their needs are understood, analysts are more likely to be able to deal with it, rather than being overloaded and misunderstood, leaving little capacity for anything else.

4.3a Work culture.

Specifically, some analysts described a positive work culture as being helpful in their work environment.

"Our work culture is good fun, when you're working long hours and you're not going home and spending a lot of time in the same company as other people, and you're under pressure, I think its natural that there's going to be cross words but on the whole I think I'm very lucky to have the team I've got and I think we work very well"

Conversely, some analysts reported their work culture as being focussed on the work and not the staff working with the TM, for example:

"The work culture is 'shut up and get on with it' It sounds awful doesn't it? It is though, you go and get your head down and you've just got to get on with whatever you're given because you've got to get the job done. I think that's really what the culture is with everybody, just get on with it. Don't moan, just do it. I think maybe that's an old fashioned attitude anyway, it's my attitude!"

Others mentioned that culture had changed to being an environment where staff felt the need to protect themselves:

"There are times when people are more concerned about covering their own backs than perhaps looking out for the team and I think there has been a cultural shift with more of the old school people leaving through retirement to the new kind of politically correct"

Another analyst described help being given to them, not out of altruism and a desire to help, but out of a desire to get on in a career:

“There are some people who I think would do something for you because that’s a tick in the box for the next promotion and that’s probably very cynical”

Previous research suggested that an organisations’ environment can affect the type of strategies employed by staff that impact upon their well being (Hyvonen, et al., 2009) and suggested that negative experiences such as these could lead to staff looking to leave their work.

4.3b Understanding the role of analyst and value of feedback.

An appreciation of being understood by the organisation for the role of an analyst and what they do was reported as being beneficial:

“I suppose people have got more of an idea now of what analysts can do. We are getting used more whereas before it was very much all statistical based”

“I can do different figures for a report but now they are actually using our skills to do telephone analysis and network analysis and charts, using more of our skills really”

However a lack of organisational understanding of the various roles undertaken by analysts was important to them. As participants worked in a wide range of roles, the result of this lack of understanding had a negative impact on the ability of some to do their work well and consequently feel engaged within their work.

“Be aware that there are different jobs within the role. There are specialisms, certain things would apply to me and not necessarily to other analysts if they are looking at different types of crime. That’s probably an issue in itself because the different roles aren’t seen as specialisms, it’s just seen as a cover all title which doesn’t acknowledge the experience you’ve got for a starter”

When referring to their manager one participant said

“I feel like there’s a lack of awareness about the actual jobs we have on and sometimes there’s a feeling that the manager wouldn’t actually know how to do the work that we do”

Receiving feedback for work completed and feeling valued for their work was reported as a strength that left analysts feeling motivated within their role, for example:

“I’m naturally quite shy and quiet. but you know the feedback I’ve had has got better and better and it’s a real confidence boost to be honest with you. It’s a real motivating factor, really, you know a really good driving force”

“I believe I do a good job, and if I’m getting the positive feedback, that I’ve done a good job, it makes me want to do it even better next time. So I suppose it’s a positive circle that I’m in really”

4.3c Consideration of special circumstances.

An organisational awareness of team members’ personal circumstances were discussed in relation to helping with their work. For example:

“I may be asked to attend meetings that are overnight, or courses that are for a week where I might be away but that’s manageable because it’s short term and I can provide childcare for my children. You do get choice in terms of what you apply for”

4.3d Workload.

Respondents reported that some of them were working in unfavourable environments in which to discuss problems and had high workloads. This made their work harder to cope with, which in turn, made them feel less able to cope with the impact of their work with TM. Many of the analysts acknowledged their workload was high.

“I just think we’re put under more and more pressure to do more and more work and I suppose it’s affecting you that way really, that the work is still piling up and there’s not enough of us to do it I think. So yeah it does have an impact with regards to the stress levels and tiredness and what have you”

They were experiencing an increasing workload for a variety of reasons, this was also a problem for other CJS staff, and was ranked as one of the highest stressors linked to overall stress (Taylor & Bennell, 2006).

“particularly in our department where you’ve got so much going on and quite often you’re juggling more than one job cause obviously murder is a little unpredictable”

“Recently I am a lot busier and I’m working a lot more hours than I have in the past just to get things going. Cos that’s the other side of it I suppose, as work progresses and technology progresses, it increases the workload and you find there’s a lot more to do in as much or less time”

“The only time its negative is when we’re extremely busy and therefore I haven’t got any time for socialising”

4.3e Current economic climate.

Pressures due to the current economic climate appeared to be having an impact on several of the analysts with uncertainty about the future of employment within the general area of policing appearing in many organisations.

“At the moment we’re obviously going through this period of perpetual change. So I do have concerns, for instance recently they reduced the number of analysts significantly and we are already seeing the strain on the analyst’s capability in the force. It concerns me, the demands put on us are increasing”

“The amount of work you’ve got and the number of hours between things, it’s probably going to get worse as well, through budget reductions”

“Its a bit harder at the moment because of all the jobs going and re-deployments”

The downsizing and economic climate appears to having an impact on analysts work:

“I wonder how long it will before people start cracking under the strain, we’re getting more work and there’s less people and the works coming from different direction to where it was coming from before, and you want to show willing”

4.3f Opportunities

Some analysts commented on lacking opportunities to progress within their career once they were analysts, either due to cut backs or lack of appropriate other work available:

“There’s no opportunity, there’s really not, and obviously, like all jobs, the higher you go the more managerial it is and the less analysis you do”

“You have to wait until the boards come round, there was meant to be one this year, there hasn’t been one for two years and they cancelled this year’s one, so nobody knows what’s happening”

Earlier research had identified that absence of opportunities to advance at work such as those reported by respondents in this study could be stressful amongst CJS staff (Morash, Haarr, & Kwak, 2006).

Age and inexperience were not analysed in this study. However they have been associated with an increased risk of developing secondary trauma and have been correlated with high levels of stress amongst counsellors (Bell, 2003; Ghahramanlou & Brodbeck, 2000). This could suggest that younger staff could be at increased risk of developing secondary trauma and high levels of stress as a result of their work.

5. Technology and Training

Technology and training was the last of the five superordinate themes (see Figure 20). It was not one of the original *a priori* themes and emerged during analysis of the data.

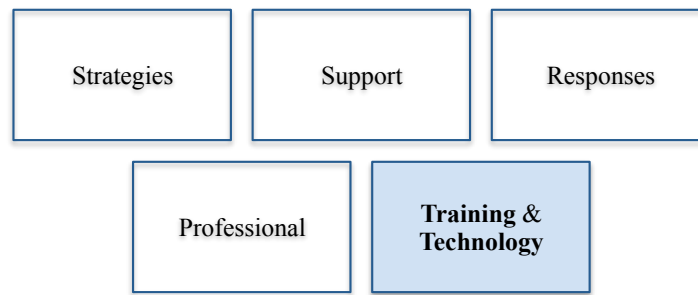


Figure 20.
Training and technology as part of five super ordinate themes

There were two second level themes (see Figure 21).

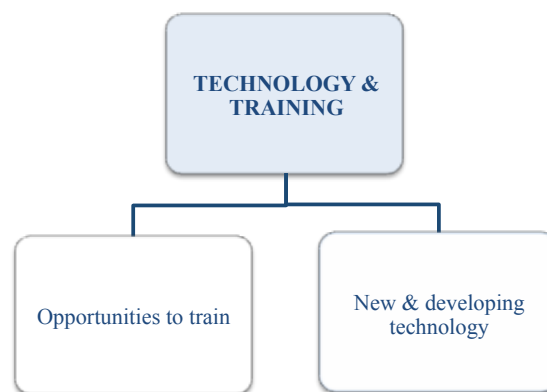


Figure 21.
Training and technology, second level themes

5.1 Opportunities to train and learn.

Having the opportunity to train, develop and learn new technologies featured in some detail for some of the respondents:

“I’ve got so many jobs under my belt now, and there’s always something to learn ... so you can be learning and developing different ways of doing it”

This theme showed some analysts did not feel as effective professionally as they had done in the past, or thought they should be. For example:

“I’ve struggled sometimes, I think oh I’m not as good, I haven’t done a university degree. So when I compare myself with other people I’m thinking

I'm not as good as they are. I wanted to prove to the youngsters that I had got every right to be there in my job as they have. You know what I mean? That sounds crazy maybe but I wanted to prove to them that I wasn't stupid, or old, past it, time to retire, that kind of thing"

"There are certain aspects [technology] of the job where I sometimes feel my brain isn't wired up that way and I feel a bit institutionalised now"

5.2 New and developing technology

Investment in the right equipment and training featured highly in participants' descriptions of strengths within their organisation:

"The job is a lot more technical now, we've got better software, more software, more money being put into it to get us some training"

Fast developments within technology and the impact upon the work of analysts were evident in many of the respondents' transcripts. The feeling of being left behind because technology was developing too fast to keep up was highlighted as a negative impact theme:

"I feel like I'm getting more out of touch with the fact it's all getting so technical. The technology's moved on so far and I think that's quite hard for me and I've struggled sometimes"

"We had a murder last year they [offenders] went straight on Facebook afterwards, with stuff that came off their phones, you know, when I started that wouldn't have happened so that's really changed."

"For a generation older than me, who haven't grown up with excess of technology, it could be more difficult to get your head round it and get a proper handle on that sort of data. I find for my generation a lot of the people I know have seen the technology develop as they've gone through childhood and early adulthood so it's less of a challenge because you have a much better fundamental understanding of it, but it's still very difficult to keep up with"

Although some respondents reported a diminished sense of enjoyment in their career, Collins and Gibbs (2003) speculated that there might be a 'survivor effect' with

longer serving staff being better able to cope in general, although this study did not measure length of service and ability to cope.

Discussion Summary

The purpose of this study was to explore what might protect or exacerbate the work of analysts working within the CJS with the traumatic material of others. All respondents in this study indicated that they worked with TM and shared this secondary exposure with other workers within the CJS including solicitors, judges and therapists (Chamberlain & Miller, 2009; Kadambi & Truscott, 2004; Vrkleviski & Franklin, 2008).

Exposure to traumatic material of others.

Themes within this study reflected current literature on criminal justice system (CJS) staff and exposure to traumatic material of others. Krause (2009), Perez et al., (2010), Ferraro and Eoghan (2005), all highlighted the potential for this work to be stressful for CJS staff, suggesting that prolonged exposure could result in negative personal outcomes that could be mitigated by external support to identify the potential for such responses to this work. Krause further identified that some staff failed to recognise changes in themselves as a result of this work. The current study identified that all respondents declared that they worked with TM, and that they were unaware of their strategies for dealing with this. Furthermore, participants reported limited use of external support. Greater utilisation of this type of support may have assisted with recognising negative personal changes in themselves (Krause, 2009).

Although this study did not measure how the respondents coped with TM or the prevalence of symptoms, some participants did report physical and emotional responses to their exposure to TM that were similar to those identified amongst researchers and other CJS professionals (e.g. Beale, et al., 2004; Brown, et al., 1999; Holt & Kristie,

2011). Secondary stress responses, such as compassion fatigue, vicarious trauma, burnout and secondary stress disorder, have the potential to reduce an employee's ability to perform their work and can affect their functioning in daily life (Figley, 1995; McCann & Pearlman, 1990; Pines & Aronson, 1988). However, all respondents described experiences in their work of exposure to potentially traumatising material, alongside a great pride and enjoyment in their work. Despite the presence of these responses for some of them, all participants conveyed their desire to continue with their work and did not feel they were affected by it. Acknowledging the work the participants undertake, experiencing some symptoms might have been expected and would be supported by the literature discussed in this study. However, it is possible that the respondents need to focus on the intensity and duration of these symptoms, as experiencing them for a long time indicates difficulties coping with their work with TM (Crabbe, Bowley, Boffard, Alexander, & Klein, 2004). Analysts in this study may benefit from external support to assist with recognising any potential negative changes within themselves (Krause, 2009).

Protective and exacerbating factors.

Professionalism was clear in all respondents, despite the presence of some exacerbating factors, respondents still felt able to continue with their work and not report symptoms. Indeed, a great pride amongst all respondents was evident; where many expressed the distinctive role they felt that crime analysts performed together with the virtues of consistently producing a high standard of work. This interpretation of their work was suggestive of a feeling of elitism that powered their ability to continue working with difficult material and often under difficult circumstances. However organisational shortcomings were indicated as hindering their well-being at work,

including a lack of organisational understanding of their role; absence of feedback; high workloads; limited opportunities and an economic climate that produced pressures in relation to uncertainty about the future. These themes have also been reported as being more stressful than working with TM in a study of 1000 police officers (Brown & Campbell, 1990). Pross and Schweitzer (2010) also identified similar organisational limitations as a source of work related stress in their study of employees' exposure to TM. A few respondents indicated they did not feel as positive about their work as they used to, but this was in relation to the development of new techniques and technology and not working with TM. Similarly another respondent felt the camaraderie had changed to a more competitive and selfish one. Despite this, analysts responding to this study reported being dedicated and conscientious and absorbed in their work.

Most respondents did not report being aware of negative impacts of their work with TM. There may be a variety of reasons for this, including strategies that were effectively protecting them from their exposure. A wide range of strategies were produced in this analysis, yet most respondents were not aware of these being strategies until asked about them in this study, suggesting they may be self developed or self-taught. However, some respondents also declared an absence of strategies and this could have been because they did not believe they needed strategies or because they had never thought about it.

When considering the literature and the results of this study, respondents were actively using adaptive coping strategies (Folkman & Lazarus, 1985). Clearly, they had a wide range of strategies including exercise, dissociation, getting support and distracting activities and these mirrored findings in other literature (Holt & Kristie, 2011; Schauben & Frazier, 1995). This study identified the ability to separate home and

work life as a protective strategy for coping with TM, which was also found in Perez et al's., (2010) study suggesting this was helpful when coping with difficult work environments.

Respondents with partners working with the CJS reported this as a largely protective factor for them. No respondents declared similar benefits with family and partners/spouses who were not employed within the CJS. All respondents reported peer support as their main source of support for their experiences of working with TM. This reflects the protective effect of peer delivered support presented in research (e.g. Ennis & Horne, 2003; Mulligan, et al., 2010; Stephens & Long, 2000).

Protectiveness was a large sub theme as all respondents declared an element of protectiveness to their family, friends and themselves as a result of their 'insider knowledge' of risks to all in various activities. This was not reported as having any negative impact on any of the respondents lives, indeed they reported this as a benefit. Family and friends of the respondents did not contribute to this study and would add valuable insight into this ripple effect and its impact.

Results showed that organisational shortcoming, isolation from peers, absence of strategies and not having a partner working in the CJS might be exacerbating factors for respondents. Organisational strengths, peer support, helpful strategies and having a partner that worked in the CJS were identified as protective factors when working with TM. However the broader experience of being an analyst also had an impact on how they experienced dealing with other people's traumatic material. It was the broader organisational structure that was impacting upon how analysts experience and manage exposure to other people's traumatic material, e.g. being given increasingly large workloads which affects their personal resources for dealing with any traumatic material they are exposed to. If they were not having to deal with such large workloads, in

difficult economic times, when objecting is not considered an option, they may deal with this material in a better or different way.

Positive growth.

Respondents expressed great satisfaction with their work and that they believed they coped well with secondary exposure to trauma. This was enhanced by being feeling valued in their work, reflecting similar findings by Bel's (2003) study of family violence therapists. Research has also shown that psychological growth is possible for some individuals working with the traumatic material of others (e.g. Ben-Porat & Itzhaky, 2009; Linley & Joseph, 2007; Perez, et al., 2010). Participants shared experiences of both positive and negative psychological impacts from their work with the traumatic material of others with other professionals within the CJS (Arnold, et al., 2005; Burke & Paton, 2006; Holt & Kristie, 2011; Perez, et al., 2010). Arnold et al., (2005), found trauma therapists felt their work led them to developing permanent positive changes in their views of the world and referred to this as 'vicarious post traumatic growth.' The themes and examples cited by respondents in this study suggest the participants were experiencing similar psychological growth as a result of their work with the traumatic material of others. Effective adaptive coping can help reduce analysts' stress in a healthy way (Arnold, et al., 2005; Sulea, et al., 2012) and strategies such as those mentioned by respondents placed within the 'Strategy' theme of this study (e.g. spending time with family, humour and compartmentalising), were helping to maintain their perceived healthy psychological wellbeing.

Limitations of the Research

Several limitations of this research need to be acknowledged. This study relied on semi structured interviews and the personal nature of this interviewing may make it

difficult to generalise findings. When participants were talking about themselves they may not have reported information accurately (Aiken & Groth-Marnat, 2006). In a climate where the CJS is under increasing scrutiny to reduce costs, respondents could have had concerns about responding openly at such a time. The use of anonymous interviews was chosen to minimise this. Participants of this study may have consciously, or subconsciously, given a response that they thought the study wanted to achieve, or they may have believed that they understood the research and adapted their responses to suit. The use of template analysis can bias the researcher to be more attentive to themes relating to the initial a priori codes (King, 2008), although in this study the a priori codes were amended during development of the template. However different researchers independently coding the transcripts can reduce this risk. This was not possible in the current study.

Given the small sample size, care should be taken before any results reported are generalised to a broader population of crime analysts. All qualitative studies capture impressions and experiences at a given moment in time and by definition may be subject to change. To expand on the findings, further research could be conducted using longitudinal measures over an extended period of time. This might give a valuable perspective of the impact of the protective and exacerbating factors upon crime analysts working with TM over time, and whether these factors change with length of service and age, for example.

The demographic composition of this sample should be carefully interpreted due to the small sample size, and overgeneralisation of this analysis to other populations of analysts should be avoided. This study produced themes that suggested the presence of certain symptoms that could indicate vicarious trauma or burnout. It did not measure for

these themes. Further research would be useful to measure and assess such symptoms and identify how these themes were linked to respondents' personal circumstance, work environments and exposure to the traumatic material of others. The anonymous design of the study precluded case by case comparisons between respondents.

Respondents worked in a variety of analyst roles. Some had been within the same role for their entire career and others said that their role changed from job to job or year to year. Therefore applying the findings of this study to all analysts within the CJS in general should be considered with caution.

Conclusions and Implications

This study reported the key findings of an exploration of factors that might protect or exacerbate the work of analyst working within the CJS with the traumatic material of others. Themes from the responses allowed for discussion and comparison between respondents' experiences and key findings in academic literature on other professions within the CJS discussed earlier.

Analysts reported the work they do involved spending time looking at information relating to the traumatic experiences of others and this had changed the way they saw the world around them. This included influencing their social activities, guiding friends and family and not trusting strangers or people who were not close to them. Perez, et al., (2010) suggested that the more exposure to 'disturbing media' US law enforcement staff had, the greater the reported impact. Future studies looking at the amount of exposure analysts have to the traumatic material of others could indicate if they too share this effect.

Although responses suggest the presence of some stress related symptoms that may be having an impact on the analysts in the study (Figley, 1995), they also

highlighted that the culture in which they work is important to how they feel about the work they do. Respondents reported an increasing workload, bringing with it various concerns. Peer support was reported as a popular method of support and professionally available support did not feature as a perceived benefit to most of the respondents. Analysts appeared unaware of strategies they employed to cope with their work with TM, and unaware of symptoms resulting from this work. Strategies described seemed to have ‘evolved’ and been self taught, such as humour and compartmentalising. This highlights an opportunity for offering analysts support with training in self awareness and coping strategies that would give them more protective skills with some of the emotional impact of their work with TM. Education would also be helpful in assisting analysts to recognise areas of emotional difficulty and indicators of healthy and unhealthy stress levels. This would empower them to take positive action where necessary to minimise, reduce or remove exacerbating factors that lead to the potential for difficulties. Being well informed about stress, its symptoms and the potential impacts of working with the traumatic material of others would help analysts to maintain a healthy level of stress. Analysts would be better able to understand and recognise these impacts, and how this may also be affecting others around them such as their family and friends. This would also benefit employers and organisations, as engagement and productivity increase when employee stress is kept at a moderate level (e.g. Sulea, et al., 2012).

As protective and exacerbating factors were identified as impacting upon respondents in this study, education, appropriately managed workloads and meaningful support may be helpful in reducing the potential for them to experience secondary stress at work (Bell, 2003). This study highlighted that whilst there was a general

acknowledgement of respondents' understanding of, and exposure to, the traumatic material of others, they took different individual approaches to how they managed the impact of this in their lives and workplace.

In relation to the broader experiences of the respondents, if they were not having to deal with such large workloads, in difficult economic times when objecting is not considered an option, were given feedback on their work, had development opportunities and felt understood within their role, they may be better equipped to manage their experiences working with TM either in an enhanced or different way.

It is hoped that the results of this study will be helpful to both employees and organisations within the CJS in considering how to improve outcomes for those staff working with the traumatic material of others. The appropriate management of analysts' workload, combined with education to better understand symptoms of stress and strategies to help cope with it, would benefit from further consideration by employers. It is likely that by providing such support and training, the potential for long term negative effects on them could be reduced.

This chapter explored what were the protective and exacerbating factors the work of crime analysts within the criminal justice system who are exposed to other people's traumatic material. By using a qualitative approach, this study provides further information on crime analysts' subjective experiences of this work. The final chapter links together the findings from previous chapters and places these within the context of previous literature. Practical implications of the findings are discussed, alongside suggestions for future research in the area.

CHAPTER V - DISCUSSION

Aim of thesis

This thesis aimed to explore how analysts experience working with other people's traumatic material. It intended to improve understanding of what factors were protective to crime analysts exposed to traumatic materials and those that exacerbated their experience. Intending to overcome some of the limitations of previous research, including an absence of literature upon analysts experiences, and limited literature upon other CJS professionals also exposed to traumatic material through their work. A qualitative research method was employed to facilitate an in depth exploration. Each chapter and its findings are summarised below.

Summary of findings

The introductory chapter outlined the potential of secondary exposure to traumatic events to impact upon individuals and a variety of professionals. This impact was discussed in relation to both negative and positive outcomes, noting that both could be also be experienced. The value of the correct type of support, the environment and self awareness were acknowledged.

Chapter II, the systematic review, highlighted that the assessment and measurement of experiences relating to exposure to traumatic material through one's profession is one of the main difficulties of research in this area. Kadambi, et al., (2004) called for the development of more sensitive assessment tools that could accurately measure and differentiate vicarious trauma from other work related stress responses such as burnout. This suggestion was reflected across all the studies as highlighted in Table 6, where the selection of appropriate tests was as varied as the studies themselves. Kadambi et al., called for a 'reconceptualisation of the phenomenon

of vicarious trauma.’ They suggested that an employees’ exposure to clients’ traumatic material may not be the catalyst that causes vicarious trauma that is often assumed to be, recommending that the assumptions around the cause of vicarious trauma amongst professionals is worthy of further examination. Concluding that the resilience possessed by the participants in the study may provide a more complete understanding of how mental health professionals flourish in their chosen professions. Other studies also suggested there may be benefits for the provision of specialist training and education to staff exposed to traumatic material (Cheung & Boutte-Queen, 2000; Steed & Downing, 1998). The systematic review identified a paucity of studies on UK populations and crime analysts or even similar professions. An absence of longitudinal studies was also highlighted. Those professionals included in the literature review showed evidence of both positive and negative change as a result of their professional exposure to traumatic material of others. The review concluded that there was a need for further research on the psychological effect of working with traumatic material upon staff employed in the CJS in the UK, in non-client facing occupations such as analysts. It was suggested that further qualitative research would be helpful in providing an understanding of analysts’ own perspectives of working with traumatic material. The research in Chapter IV aimed to address this.

Chapter III explored the utility of using the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983) as part of assessing psychological effects of working with traumatic material, upon crime analysts. The psychometric properties and the efficacy of the HADS as a measure of anxiety and depression were explored. As the HADS measures levels of anxiety and depression it may have presented itself as a useful measure of wellbeing amongst analysts. The implications of the critique

suggested that it would not be an appropriate measure to assess this well being in analysts as there was an absence of evidence of test-retest reliability and a lack of consistency in the factor construct. Studies demonstrated that the HADS potentially demonstrated not just two factors but up to five. The ability of the HADS to actually measure the constructs of anxiety and depression was not clear. Debate was discussed whether the HADS could be useful as a general indicator of emotional distress. However, it was suggested that it may be useful only as an initial screening tool to identify the possible presence of emotional disturbance amongst those analysts exposed to traumatic material in future studies, particularly as part of a longitudinal study, as the HADS has shown to be an effective measure over time.

Chapter IV detailed a research study exploring the work of crime analysts, employed by the criminal justice system, exposed to the traumatic material of others: protective and exacerbating factors. The study employed a qualitative method to allow for the exploration of opinions and thoughts of staff working in these areas in depth, and to inform the aims of the study. This study used semi structured interviews to explore the analysts' personal experiences of their work and factors that both helped and hindered in this.

The results revealed that analysts did report that their work involved spending time looking at information relating to the traumatic experiences of others and this had changed the way they saw the world around them. This included influencing their social activities, guiding friends and family and not trusting strangers or people who were not close to them. Both protective and exacerbating factors were identified as impacting upon the respondents in this study and education, appropriately managed workloads and meaningful support were identified as having the potential to help with

negative experiences from their secondary exposure to trauma. However, whilst there was a general acknowledgement of respondents' understanding of their exposure to traumatic material, it was apparent that participants took an individual approach to how they managed the impact of this in their lives and workplace. In relation to the broader experiences of the analysts, it was felt that wider organisational factors such as workload, economic climate, feedback on work, feeling understood and development opportunities could either assist with, or detract from, their ability to effectively manage their exposure. Suggestions reflected those in studies in Chapter II where training to identify, understand and manage the potential for stress symptoms could have the potential to reduce any possible long term negative effects of their work. If appropriate support structures are not in place for staff working with this material, or they do not recognise their value, then they cannot call upon them to help when needed.

Theoretical implications:

The current research made several contributions to the existing literature, adding to the growing research base into individuals' experiences of working with the traumatic material of others. In contrast to most other studies on secondary exposure to trauma, this empirical study explored analysts' experiences qualitatively. It demonstrated that there were a variety of factors that both exacerbated and protected analysts with this work. Other studies have been conducted upon other professions, mainly therapists working with victims of trauma, although some studies have focussed on traumatic material exposure including solicitors and judges, and also mock jurors (Bright & Goodman-Delahunty, 2006; Chamberlain & Miller, 2009; Vrkleviski & Franklin, 2008; Whalen & Blanchard, 1982), none have focussed on the work of analysts. Therefore this study contributes to the literature that widens the knowledge of the experiences of

employees within the CJS exposed to traumatic material of others, in particular the experiences of analysts.

The theories discussed in Chapter I, emphasised the potential effects of exposure to traumatic material of others. This included negative impacts that can reduce a professional's ability to perform their work, that can also affect their functioning in every day life beyond their occupational activities (e.g. Figley & Kleber, 1995; Stamm, 1997). Organisational shortcomings; isolation from peers; absence of strategies and not having a partner working in the CJS were all potentially exacerbating areas within the experiences of the study's respondents in Chapter IV.

Findings from both the systematic review (Chapter II) and the research study (Chapter IV), suggested that whilst some staff do report such negative impacts, it seems that this was dependent upon other factors being present or absent such as appropriate support, good organisational structure and understanding. For example workload functioned as an exacerbating factor within respondents work. One explanation for this is that a high workload might provide fewer opportunities for analysts to psychologically process the events they are exposed to, less opportunity to access peer support and focus on self care. It was identified in the PTG model (Calhoun & Tedeschi, 2006) that time to cognitively process an event was an important factor in developing post traumatic growth and increasing resilience to future traumatic experiences.

Chapter I also examined theories of growth amongst individuals experiencing trauma, both personally and professionally (Calhoun & Tedeschi, 2006; Linley & Joseph, 2007; Tedeschi & Calhoun, 1995). Literature throughout this thesis and in the research study suggests that some individuals report experience positive responses to working with traumatic material (e.g. Ben-Porat & Itzhaky, 2009; Linley & Joseph, 2007; Perez, et al., 2010; Vrkleviski & Franklin, 2008). The current study (Chapter IV),

identified protective experiences of working with traumatic material that were likely to include: having a partner working within the CJS; peer support; positive organisational strengths and helpful strategies. This is in support of other recent research (Calhoun & Tedeschi, 2006), however, the nature of the interaction between these factors continues to require further exploration. Although it is difficult to imply causality from the current cross-sectional study, the findings tentatively support social support theories, which suggest that those who feel able to confidently share their feelings with others show a greater resilience to be better able to process traumatic experiences and allow better comprehension of what was involved (Calhoun & Tedeschi, 2006; Lepore, 2001; Saegert, et al., 2001; Tedeschi & Calhoun, 2004).

Chapter IV identified that participants reported a high level of benefit from peer support and support of a partner working within the CJS. Conversely, the use of professional and social support, and support of a partner not working within the CJS were not reported as being utilised by respondents in this study, suggesting that analysts in this study are not using these for support in their experiences of traumatic material of others. As the ‘wrong’ sort of social support has been reported as counterproductive and the presumption that any support is better than none is misplaced (Lanza, et al., 1995; Revenson, et al., 1991), participants in this study have identified what they utilise for their own support and it is possible that any professional support that may be available, is not the type of support required by analysts and therefore not being utilised.

Chapter IV also found that respondents were engaging in activities to take their minds off exposure to traumatic material within of their work, and using dissociation and compartmentalisation as strategies, supporting other research that suggests engaging in positive activities can enable individuals to stop thinking about their

stressors and that in some instances such engagement can help individuals by preventing them from ruminating over traumatic experiences (Lepore, 2001).

More detailed analysis of the data in the research study could lead to the proposal of a model of the effects of working with traumatic material of others within the CJS. However, as a result of the analysis thus far and discussed above, the provisional diagram of the interactions between exposure to traumatic material, exacerbating and protective factors, the organisational facilitators and the resulting experience upon analysts' within the CJS has been produced (Figure 22).

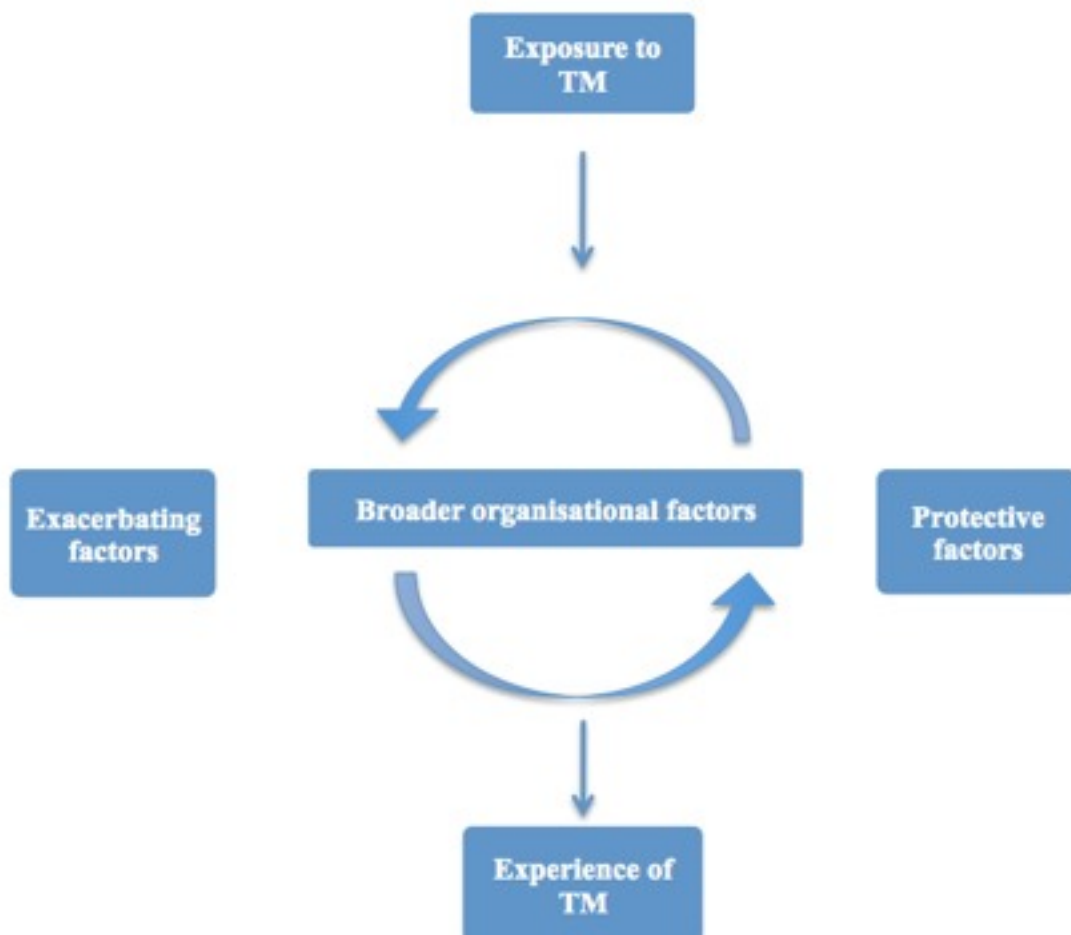


Figure 22
Diagram of the impact of working with the traumatic material of others upon analysts' within the CJS.

It is suggested that organisational protective or exacerbating factors will contribute to an analysts' experience of exposure, such as workload, time to reflect and appropriate support.

This thesis has explored a variety of conditions under which individuals are exposed to traumatic material through their work and various definitions have been explored. Several psychological concepts propose explanations for reactions resulting from exposure to traumatic material such as secondary traumatic stress disorder and vicarious trauma. In the main, these focus on individuals working with victims of trauma in a helping capacity such as therapists and police officers. The literature review highlighted the difficulty of researchers in linking the appropriate concept, and subsequently an appropriate measure, with which to assess a variety of participants exposed to traumatic material. It appears that there are responses to exposure to traumatic material that simply do not fit in any of these existing concepts, such as those who acknowledge their exposure to traumatic material (not the accounts of victims recalling traumatic incidents), and the presence of some responses (e.g. mood change, schema shifts, changing their view of the world). Alongside this they express great pride and enjoyment in their work, not feeling their responses at the time of their exposure were sufficient to impact upon them long term. Overall, evidence within this thesis suggests that there is considerable overlap in relation to the symptomology between recognised trauma disorders such as STSD, PTSD and VT and that of PTG and resilience. Despite some of these definitions encompassing the positive as well as the negative consequences of this work, there appears to be a gap for a definition of the range of responses that apply to staff who are not working in a helping role, who are not working directly with emergency incidents or victims of trauma, but do have

experiences of exposure to a range of potentially traumatic material, such as the work of crime analysts. These responses might include physical and emotional responses and personal growth. The reason for their reported responses to the traumatic material does not always appear to be because of some of the previously identified triggers for stress disorder such as empathy with a victim, but more as a result of the ‘moment’ and the meaning of that moment of exposure, and also the wish and ability to continue working with exposure to traumatic material for the reward of belonging to a perceived professional group of elite specialists.

These aspects highlight the need for a separate construct and Response to Traumatic Material Exposure (RTME) is proposed, characterised by a variety of responses in the aftermath of an individual’s exposure to traumatic material. This traumatic material relates to wide spectrum of material including visual, audio and physical exhibits. Those experiencing RTME will present with individual differences, as with any trauma-distress response. These are likely to include differences in tolerance, previous experience, previous trauma, history of mental health issues, exposure to difficult materials (frequency) and system (family, partner, previous education, professional training, supervision etc). Moreover, there would be different cognitions and emotions involved in the trigger for RTME than for other trauma responses, and therefore different coping strategies would be required. All of these aspects highlight the need for a separate concept that relates to RTME. Responses are triggered by exposure to material that an individual considers traumatic at the time of exposure and this exposure is not dramatically life threatening/changing, such as experiences of trauma within PTSD, nor is it purely as a result of secondary exposure to another persons traumatic material such as STSD and VT, all of which suggest a more severe response.

It is suggested that RTME can produce a variety of reactions where the response could relate to both schema shifts (positive and negative) and a variety of cognitions and emotions involved in the trigger at the time, i.e. coping strategies. As with other concepts, some overlapping of symptoms could occur depending upon the individual differences and characteristics.

It is important to consider the underlying cause of RTME, as this also indicates the maintaining factors as well as directing potential treatment to assist those experiencing it. Future research into further defining the experiences of those specifically exposed to traumatic material, including crime analysts, is required. This does not, of course, preclude the existence of STSD, VT or even PTSD and PG within this population; neither does the suggestion of RTME imply that an individual may not experience any of these.

As a result of this research, the need for a new concept has been identified that could explain responses of the group of occupations that work in this environment. However, it was not the aim of this thesis and RTME is just an initial suggestion that has emerged as a contribution to explaining some of the difficulties in experiences, training and assessment selection when researching staff such as crime analysts. It is important to explore and establish if this concept and symptoms are actually relevant to this group and establish this concept in order to find theory with which to explore it. It needs further research to study this specific group of employees who are exposed to traumatic material through their work and experiencing a variety of responses. Further research would aim to understand more about these responses and understand what is behind them, the mechanics of what would help with this work and identify what is the best support that could be offered to these individuals. Currently, support is not being

utilised and it may be that this is because it is not aimed at the triggers, maintaining factors and responses that these employees are experiencing, as support programmes are currently based on existing concepts designed to work with different work groups with different experiences.

This thesis has recognised the importance of individuals' experiences following exposure to traumatic experiences and has acknowledged that this can affect a variety of professionals including crime analysts working within the UK criminal justice system. It has identified a range of personal and work related experiences following exposure to other peoples' traumatic material.

Practical Implications

The findings of this thesis have a number of potential practical implications for analysts and their employers. There were high levels of job satisfaction reported by analysts, highlighting their professionalism when faced with a number of exacerbating factors in their work in Chapter IV. However, there is a clear need to recognise that there may be important distinctions in experiences of exposure to traumatic material through work, to be made across individuals whose professional environment was supportive and well managed and those which were not. For this reason, it is not likely that generalising across all analysts working for the CJS would be appropriate or effective at addressing the experiences identified in this study. It is likely that their experiences vary from job to job and person to person and that any planned interventions should be tailored to the individual needs of the analyst at the time, although the findings in this study will contribute to improved understanding of their experiences. It is possible that analysts' experiences can also vary by years in service and age, although this was not assessed in this study.

Relatively low levels of responses such as physical and emotional symptoms were reported in this study (Chapter IV). There may be value in recognising the positive aspects of the work experiences, such as pride and feeling valued. Furthermore exploration of any scope to improve self awareness in relation to identifying, understanding and the potential for this work to lead to negative symptoms if adequate awareness is absent. However, the research revealed a number of areas of difficulty for analysts in this study. The broader influences of the organisation in which analysts are employed were seen to influence how they experienced their work and this provides a further opportunity for employers to consider analysts' conditions at work including managing excessive workloads; reassurance about economic climate where possible and where this is not possible keeping them well informed about how this might impact upon them; giving feedback on work produced by analysts and ensuring the opportunity for peer support is available for those analysts that might be working in isolated environments. Employers should give thought should be given to improving these aspects.

Furthermore, the current research study (Chapter IV) highlighted the reluctance of analysts to seek professional support for their experiences at work, due to not believing they needed such help, not considering it helpful, to not being aware of it's availability to them. Acknowledging that individuals respond to traumatic exposure in a wide variety of ways, what is currently available to analysts as 'professional support' needs to consider whether what it is offering is appropriate and not unnecessary assistance and not encouraging staff to dwell on traumatic events or questioning their reactions, as this can be more harmful than helpful (Lepore, et al., 2004; Revenson, et

al., 1991) and the reasons for why these services are not reported as being valued or meeting the needs of the analysts, needs further exploration.

Participants did not identify partners that were not working in the criminal justice system and social support as being protective to them in their work. Therefore, thought should be given to ways in which analysts could seek appropriate support that is perceived as being valuable to them. Clearly, peer support was the most widely utilised and reported, with high regard by the participants of the study together with support of a partner also working within the criminal justice system. Lack of awareness of strategies and absence of using professional support, could provide an opportunity for professional support to be offered as a useful source of training in these areas in the first instance. Therefore providing heightened self awareness and education for analysts in relation to their work, which may in time raise the perceived value of professional support in the more traditional sense of offering support after traumatic experiences. This emphasises the importance of ensuring that procedures are in place to help facilitate the development of giving the analysts enough education and self awareness.

Limitations of thesis

This thesis has a number of limitations that have been highlighted within each chapter. It is important to bear these in mind when considering the conclusions.

In the empirical research study, the recruitment method may have introduced bias due to the opportunistic sampling method. Further bias may also have been introduced due to the author's previous experience and the use of template analysis. The study used a relatively small sample size, although actual numbers are unknown, it is likely that crime analysts are not a large population and that the sample of 12 may be quite a reasonable size, this has not been evaluated in this thesis.

Another limitation is that the research study explored data resulting from semi structured interviews. Although representing a valuable way of exploring analysts experiences of their work with traumatic material, this method relies on the respondents being accurate and honest in their accounts. As discussed in Chapter IV, some staff may be reluctant to disclose some information, such as symptoms and not being able to cope well, for fear of professional implications should it be linked to them in the future. The format of a semi structured interview allows participants to decide what they reveal about themselves, which may be a limiting factor, if they do not share all of their experiences. When combined with the potential selectivity of template analysis this may have left areas that have not been thoroughly explored in this research. Respondents reported a high level of protective behaviours to themselves, their family and friends, as being a positive experience and a benefit to all. The experiences of those around the analysts were not explored and this is a limitation to the study, as the perceived benefit of this behaviour, may be perceived differently by family and friends.

This study was designed as a qualitative exploration of analysts experiences and as such did not measure levels of secondary traumatic stress (STS) amongst participants. Therefore, the results do not account for whether or not the respondents did experience STS or what may contribute to them developing it at some point.

The respondents in the research study were employed by a variety of law enforcement organisations and will have been exposed to different situations, individually and organisationally. Although the qualitative responses provided a good source of data, there may be specific factors that relate more to one organisation or individual than others, and within this study these have not been separated. Case by case analysis could reduce this limitation in future studies. This study relied on cross

sectional analysis and explored aspects of data provided at one time and are, therefore, limited in their ability to draw inferences about how the reported factors related to each other. Furthermore, respondents subjective experiences are likely to change over time, potentially from day to day, week to week, and also by job i.e., one particular job may differ significantly from another. This is a limitation of a cross sectional study and longitudinal studies would be helpful in exploring these factors and how they may change and develop over time.

The systematic review highlighted the absence of studies considering analysts working within the CJS, and the limited number of existing studies on CJS staff in general working with the traumatic material of others. The heterogeneity of these studies, such as variations in assessments and populations was also highlighted; make it difficult to identify a representative sample of CJS employees and experiences from which to draw conclusions about their experiences of traumatic material as a whole. It is, therefore, also difficult to generalise findings to other analysts in particular.

Future research

As already highlighted, this thesis was exploratory in nature and therefore the findings are tentative. As such, future research is recommended to develop both the validity and applicability of the findings. This could be achieved by repeating the research with a larger sample size, and perhaps incorporating a control group of staff that are not exposed to traumatic material working in similar environments, although given the nature of the work this may be difficult to achieve. Secondly, a longitudinal study would identify aspects of change within individuals over time, as previous research has shown that age and inexperience have been associated with an increased risk of developing secondary trauma and correlated with higher levels of stress amongst

counsellors (Bell, 2003; Ghahramanlou & Brodbeck, 2000). If younger staff showed to be at increased risk of developing secondary trauma and higher levels of stress as a result of their work then action could be taken to minimise this. Such a study could also examine the differences between longer serving staff and newer, younger staff over time to identify if there is indeed a ‘survivor effect’ as suggested by Collins and Gibbs (2003). A more detailed exploration of the protective behaviours as identified in Chapter IV could consider the impact of these behaviours upon the family and friends of analysts, identifying whether it was seen as a benefit or a negative impact upon them, and whether they shared the beliefs about this with the analysts themselves.

Previous research has suggested that the environment (including settings and situations) of an individual exposed to trauma can influence how they manage the exposure (e.g. Calhoun & Tedeschi, 2006; Lepore, et al., 2004; Revenson, et al., 1991; Wortman, 2004), the current research did not measure this influence. Although aspects of the organisation were shown to influence the experience of analysts working with traumatic material, future research could investigate the environment itself within which analysts work and whether this influences experiences from their work.

In view of the limitations identified throughout the thesis in identifying an appropriate, all encompassing measure for assessing secondary trauma for those experiencing it through their work, the development of such a tool would contribute to future studies with many employee populations. Future research endeavours should be mindful of ensuring that any such measures are appropriate for the participants, as some studies have been utilising assessment measures intended for actual victims of trauma themselves. Research has identified positive aspects of working with traumatic material of others, including the current study and those in the literature review (Chapters II and

IV). The PTGI (Tedeschi & Calhoun, 1996) would provide an opportunity to look at the levels of growth within analysts and the links to their cognitive activity in relation to this aspect of their work (Linley & Joseph, 2007). If Calhoun and Tedeschi (2006) are correct in their suggestion that being prepared for exposure to future traumatic events decreases cognitive disruption upon future exposure, then a longitudinal study could identify if this is occurring for some staff exposed to traumatic material. This could then be utilised in future education and self awareness training to further improve self efficacy amongst staff. Assessment of organisational structure, understanding and management of staff would prove an interesting part of this research as it has been shown to have such an impact upon analysts in this study. As Chapter II and Chapter IV have shown, staff exposed to this material are demonstrating positive elements from their work and this certainly warrants further exploration. Wortman's (2004) warning about over simplifying the concept of psychological growth following traumatic experiences, lends itself to researchers hopeful of identifying future ways to contribute to such growth. She suggests that the conception of PTG itself could leave some individuals feeling shamed or inadequate, should they be unable to experience positive growth following traumatic exposure. Therefore, it is important that any research considers its aims carefully and does not offer counterproductive data.

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APPENDICES

Appendix A - Data Extraction Form

Date of extraction		
Author/s		
<i>Data to be extracted</i>		
Title of study		
Source		
Year of publication		
Country of study		
Participants/Population		
Study Objective		
Study Design		
Location/setting		
Study Methodology		
Results		
Authors' conclusions		
Strengths & weaknesses		
Notes		
Continue?	Yes	No

Appendix B Participant Information Sheet

Participation Information Sheet

I am studying for a Doctorate in Forensic Psychology Practice at the University of Birmingham and I am contacting you because you are a crime analyst. I would like to invite you to take part in an interview regarding your work as a crime analyst, whether it has had an effect on your life (positive or negative or none at all) and if/how you have adapted to the nature of the work you conduct.

Participation in this research is completely voluntary and you are under no obligation at all to take part. If you would like to take part I will arrange a telephone interview with you at a date and time that is mutually convenient. To help you make a decision as to whether you wish to take part or not I have included more information about what the interview would entail below.

The Procedure of what you are being asked to participate in:

If you agree to participate in this research, you will take part in a semi-structured interview with the researcher over the telephone. We expect that this interview will take between one and two hours to complete. The interview will consist of topics regarding what your work is like, whether your work has had any effect (positive or negative) on different aspects of your life (e.g., how you feel about the world, your work, how you socialize) and, if you think the work has the potential to have a negative effect, how you manage this. It is called a semi-structured interview because depending on how you may answer a question can affect the next question you are asked.

The Interview

The interview will be tape-recorded to ensure the researcher has a complete record of your thoughts regarding your job. However, the interview will be anonymous in that no reference will be made to you by name during the interview. You will be given a unique identification number to keep that will be used to refer to any data gathered during your interview. All material will be securely stored in a locked cabinet in line with the Data Protection Act.

Whilst it is obviously helpful to answer as honestly and openly as you can, you are under no obligation at

any time to say or do anything that you are not happy with. Please note that your rights are not affected with this research and more information is in the rights section of this information sheet.

Security of participants' information and protecting your identity will be paramount for this study. This will be achieved in several ways outlined below.

Data Storage

Interviews will be audio taped, however, the interviewer will use no names during interview. Any names that you might use during the interview will not be recorded in the transcriptions. Interviews will be transcribed straight away and when completed any identifiers (e.g., names) will be taken out. Once transcribed, tapes and transcripts will be stored in locked cabinets for up to ten years, in accordance with the Data Protection Act. Interviewees will be asked to sign a consent form and this will be stored securely and separate from any recordings or transcripts.

Anonymity

Interviewees will be allocated a number that will enable the retrieval of their data should they require to withdraw from the study in the future: this means that if you wish to withdraw from the study after the interview has taken place you can do so by simply contacting us with your ID number. Please note you can only withdraw from the study up until 4th December 2011 since after this date the findings will be presented to the University of Birmingham for assessment as part of a Doctorate qualification. In the Doctoral thesis and in any subsequent publications, quotations from the interviews will be used to illustrate points but no reference will be made to you by name. In addition, if you hold a position that few other individuals hold (e.g., principal analyst), in any publication of the findings we will refer generally to the amount of experience you have in the role (e.g., more than three years experience) rather than use your job title.

Are there any risks?

Now you have read the information about this research you will realise that it is possible that you may be exploring potential areas of stress within your workplace during your interview. It may be that you feel you would like some support with your feelings and thoughts about this.

Should you like to access such support the following are some options that might be helpful to you:

Samaritans: [REDACTED]

24-hour help line: [REDACTED]

(Details to be completed upon confirmation of appropriate in-house support and agreed appropriate external independent support such as Samaritans).

What are the benefits of taking part?

Although we cannot pay you for being interviewed, by taking part you would provide us with a valuable insight into your experiences as a crime analyst. When completed, this study hopes to enhance knowledge about the experiences of staff working within Criminal Justice Systems, specifically those working regularly with traumatic material and the strategies they have developed through their careers. We intend to disseminate the findings to your employer through a report but also more widely to the policing and academic community via academic publications so that crime analysts in different police forces and units might benefit. Please note your identity will be protected in any such publications.

Confidentiality

As this is an academic piece of research aimed at contributing to the existing knowledge in this area, the findings from this study will be published in a doctoral thesis and we also intend to write up the research to disseminate it to the police forces/units involved in the research and to the academic community through a journal article and conference presentations. We can assure you that your identity will NOT be revealed in any way in these publications.

If you decide to participate in the study you will be assigned an identifying number that will be used from that point on for the completion of the interview. The transcript of your interview will be anonymised and any other information will be strictly confidential and stored securely.

Rights

You are free to participate, decline or withdraw from this research. If you change your mind about wanting to be in this study at a later date you can do so without any obligations to the study up until 4th December 2011. If you withdraw from the study your interview tape and transcript will be destroyed.

There are no consequences for you should you decide to withdraw. You will need to keep your identifying number in order to do this, without this number it will not be possible to identify your data in the future because we will only label your transcript with your ID number. You will be able to withdraw from the study up until 4th December 2011 by telephoning: [REDACTED], stating that you wish to withdraw from the Crime Analyst Interview Study and leaving your identifying number. You will not need to leave your name.

If you should have a complaint about this study or require more information about it please contact:

Course Director, Centre for Forensic and Criminological Psychology
School of Psychology, Frankland Building
University of Birmingham
Edgbaston
Birmingham, B15 2TT.

Thank you for taking the time to read about this research.

Should you like any further information please contact:

[REDACTED], Centre for Forensic and Criminological Psychology, School of Psychology,
Frankland Building, University of Birmingham, Edgbaston, Birmingham, B15 2TT.
Email [REDACTED]

**If having read this information you would like to be interviewed by Tracy Lavis, please contact
Tracy using the contact details above and she will arrange an interview with you**

Appendix C Consent Form

Participant Consent form.

ID number:[please write your personalised ID number here]

It is important that before you sign this consent form you understand the information about this research so that you can make an informed decision about whether or not you wish to participate.

- I confirm that I understand the information provided to me on the information sheet and on this consent form and I am willing to participate in this research project.
- I also understand that I can withdraw or decline to participate at any time prior to 4th December 2011 and that I am not giving up my legal rights by signing this consent form.

If you agree with the above statements, please print your name, sign and date the form below before returning it to [REDACTED], Centre for Forensic and Criminological Psychology, School of Psychology, Frankland Building, University of Birmingham, Edgbaston, Birmingham, B15 2TT **alongside the contact details that you would like [REDACTED] to use to contact you to arrange a date and time for your interview.**

Name:

Signature:

Date:

Contact Details for Tracy to use to arrange interview:

Appendix D Semi structured interview schedule

Semi-structured Interview Schedule

Any questions before we start?

Section 1: Demographics:

1. Age
2. Occupation
3. Length in this particular job
4. Type of crimes working with
5. Key responsibilities expected within job
6. Amount of employment time exposed to the traumatic material of others (extent of exposure to the traumatic material of others e.g., victim statements=the traumatic material of others, phone analysis=not the traumatic material of others). Self scale 1-100%.

Section 2: Processes and key terms:

- 1 How would you describe your role as a crime analyst?
2. What do you think makes someone a good crime analyst?
3. What is it about your job that you really enjoy?
4. What is it about your job that you really don't like?
5. Has your work as a crime analyst changed over the years?
6. Has your work as a crime analyst had an effect on...

- How you feel about the world?
- Your home life?
- Your interactions with family or friends?
- Your work?
- Your social life?
- How you feel about yourself?

in either a positive or negative way?

Follow up with questions about coping strategies and resilience (has this always been an issue/have you always felt like that? How did you deal with that?)

7. Has your work as crime analyst had an impact upon your wellbeing either in a positive or negative way?
8. Have you experienced challenges associated with your involvement in the justice system? If so what were they?
 - a. Organisational?
 - b. Economic?
 - c. Social?
 - d. Legal?
 - e. Emotional?
9. How would you define vicarious traumatisation? (If unsure this will be defined for them).
10. Have you known of situations where this has occurred?
11. What's your work culture like? Does this have an effect on your work or how you feel about it?
12. What does the term 'traumatic material' mean to you?

13. Do you think you work with the traumatic material of others?

14. Have you ever worked with the traumatic material of others before this job?

Prompt if answer yes to identify details.

Can you tell me a bit about your work with the traumatic material of others?

15. How do you manage situations involving the traumatic material of others? Any strategies for working with the traumatic material of others?

Prompt if necessary for detail.

16. Have you ever discussed with others your feelings following working with the traumatic material of others?

a. Yes – if positive or negative feelings, who was this?

b. No – if negative feelings, why not?

17. What would you like to tell others about your work as a crime analyst?

a. The public

b. Other professionals

c. Friends and family

18. If I was to tell you now that I want to become a crime analyst, what one piece of advice would you give me?

19. If a crime analyst was experiencing a negative reaction to the traumatic material they were working with, what solutions would you suggest, if any, to limit the effects?

a. Follow up with whether this could apply to other professions in the CJS?

20. Is there anything you would like to add?

21. Have you any questions you would like to ask me?

Appendix E Debrief document

DEBRIEF DOCUMENT

Thank you

Thank you for sharing your knowledge with us during your interview. We appreciate your participation and hope you will be interested in the results of the study when it is completed. If you would like to request information about the study's findings please contact:

██████████, Centre for Forensic and Criminological Psychology, School of Psychology,
Frankland Building, University of Birmingham, Edgbaston, Birmingham, B15 2TT.

Email: ██████████

Your answers will form part of a longer-term study investigating whether working as a crime analyst has any impact (positive or negative, or none at all) on individuals. If it does have a negative impact we are interested to know how crime analysts manage this. By researching and exploring coping and prevention strategies utilised by UK Crime Analysts it will be possible to identify themes such as how or why resilience and coping strategies develop during a career as a crime analyst. This in turn would enable the identification of environments and policies that could enhance this development and the subsequent well being of these individuals.

Such research would also contribute to the development and practical application of knowledge to minimise any adverse effects of any potential stressful work events and circumstances for UK Crime Analysts and to promote the advance and awareness of the benefits of a healthy professional environment when working with potentially emotionally threatening material. Of course Crime Analysts working in the UK are not alone in their professional experiences and others may be experiencing and developing similar or unique responses to the demands and requirements of their profession.

The results may indicate areas for new interventions that could support Crime Analysts (and similar

professionals) in their work.

How to withdraw

If you decide you would like to withdraw at a later date you can do so up until 4th December 2011 by ringing: [REDACTED] and leaving a message stating that you would like to withdraw from the “Crime Analyst Interview Study” and quoting your unique identification number. You do not need to leave your name. It is essential you quote your identification number that you chose during the study because without it we will not be able to remove your data.

How to get support if you feel upset/distressed

If you are at all upset following the interview you may feel you would like some support with your feelings and thoughts about this.

Should you like to access such support the following are some options that might be helpful to you:

Samaritans:

24-hour helpline [REDACTED]

In house support via Occupational Health Team [REDACTED]

APPENDIX F Final Coding Template

Final Coding Template

1. Strategies

1.1 Cognitive

- a. Remaining focussed*
- b. Normalising*
- c. Monitoring self, limits on exposure to the traumatic material of others*
- d. Humour*
- e. Dissociation/ compartmentalise*
- f. Victim empathy*

1.2 Behavioural

- a. Exercise & distracting activities*
- b. Spending time with family/friends*
- c. Socialising with work colleagues*
- d. Avoid violent media*
- e. Commitment to important personal events*
- f. Protectiveness*

1.3 Absence of strategies

2. Responses to working with TM

3. Support

3.1 Professional support

3.2 Peer support

3.3 Social support

4. Professional

4.1. Individual

- 4.1a Professionalism*
- 4.1b Benefits of the tasks undertaken*
- 4.1c Self confidence*
- 4.1d Good people skills*
- 4.1e Being realistic*

4.2 Team

Final Coding Template

4.2a Being part of team

4.2b Team feels like family

4.3 Organisation

4.3a Work culture

4.3b Understanding role of analyst and value of feedback

4.3c Consideration of special circumstances

4.3d Workload

4.3e Current economic climate


4.3f Opportunities

5. Technology & Training

5.1 Opportunities to train

5.2 New & developing technology

APPENDIX G HOSPITAL ANXIETY AND DEPRESSION SCALE (HADS)



Hospital Anxiety and Depression Scale (HADS)

Name: _____ Date: _____

Clinicians are aware that emotions play an important part in most illnesses. If your clinician knows about these feelings he or she will be able to help you more.

This questionnaire is designed to help your clinician to know how you feel. Read each item below and **underline the reply** which comes closest to how you have been feeling in the past week. Ignore the numbers printed at the edge of the questionnaire.

Don't take too long over your replies, your immediate reaction to each item will probably be more accurate than a long, thought-out response.

FOLD HERE

A	D			A	D
		I feel tense or 'wound up'	I feel as if I am slowed down		
3		Most of the time	Nearly all the time		3
2		A lot of the time	Very often		2
1		From time to time, occasionally	Sometimes		1
		Not at all	Not at all		
	3	I still enjoy the things I used to enjoy	I get a sort of frightened feeling like 'butterflies' in the stomach		3
	2	Definitely as much	Not at all		2
	1	Not quite so much	Occasionally		1
		Only a little	Quite often		
		Hardly at all	Very often		
		I get a sort of frightened feeling as if something awful is about to happen	I have lost interest in my appearance		
3		Very definitely and quite badly	Definitely		3
2		Yes, but not too badly	I don't take as much care as I should		2
1		A little, but it doesn't worry me	I may not take quite as much care		1
		Not at all	I take just as much care as ever		
	3	I can laugh and see the funny side of things	I feel restless as if I have to be on the move		3
	2	As much as I always could	Very much indeed		2
	1	Not quite so much now	Quite a lot		1
		Definitely not so much now	Not very much		
		Not at all	Not at all		
		Worrying thoughts go through my mind	I look forward with enjoyment to things		
3		A great deal of the time	As much as I ever did		3
2		A lot of the time	Rather less than I used to		2
1		Not too often	Definitely less than I used to		1
		Very little	Hardly at all		
	3	I feel cheerful	I get sudden feelings of panic		3
	2	Never	Very often indeed		2
	1	Not often	Quite often		1
		Sometimes	Not very often		
		Most of the time	Not at all		
	3	I can sit at ease and feel relaxed	I can enjoy a good book or radio or television programme		3
	2	Definitely	Often		2
	1	Usually	Sometimes		1
		Not often	Not often		
		Not at all	Very seldom		

FOLD HERE

Now check that you have answered all the questions

This form is printed in green. Any other colour is an unauthorised photocopy.

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