

Doctoral Thesis

Emergency Personnel's Experiences of Their Role

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Abstract

This thesis explored the experiences of emergency personnel (ambulance clinicians, firefighters and police officers) when encountering potentially traumatic incidents as part of their role.

The literature review synthesised the findings from 17 qualitative studies that reported on emergency personnel's experience of the stressful nature of their role. The process elicited seven concepts: (1) feelings of inadequacy and uncertainty; (2) macho culture; (3) identification; (4) impact of the job; (5) hardening to the job; (6) detachment and dehumanisation; and (7) coping strategies following the job. The findings suggested that emergency responders use detachment strategies to maintain focus on the job and the factors that can hinder this, resulting in distress. The results also suggest there is a macho culture associated with the emergency personnel organisation which can implicate social support and discussion of emotional responses.

The research study employed a qualitative Interpretative Phenomenological Analysis design to investigate ambulance clinicians' experiences of psychological trauma as a consequence of their role. Four super-ordinate themes emerged: (1) focused and detached in order to do the job; (2) "we are only human": The risks of emotionally connecting; (3) regaining control and processing the event; (4) The psychological impact and implications for support. The findings demonstrate the difficulties ambulance clinicians can experience as a result from routine practice, the need for support and implications of seeking it.

The critical appraisal provides a summary of the research study and its findings. It details reflections and reasons for the self-selection approach to sampling. Also, reflections from the conflict that arose between researcher and clinician roles is discussed.

Declaration

This thesis records work undertaken for the Doctorate in Clinical Psychology at the Division of Health Research at Lancaster University. The work presented is the author's own, except where due references are made. This piece of work has not been submitted for the award of a higher degree elsewhere.

Name: Lauren Rutter

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Date: 18th June 2018

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Section One: Literature Review

A Qualitative Meta-Synthesis of Emergency Personnel's Experiences of The Stressful Nature of
Their Role.

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Abstract

Emergency personnel frequently encounter critical incidents and the emotional and cognitive responses to these can present them with a variety of difficulties. A body of literature has shown the routine work of responding to traumatic events can be potentially harmful to their mental health and emotional wellbeing. To evaluate how emergency personnel (firefighters, police officers and ambulance clinicians) experience the stressful nature of their role, a meta-ethnography was conducted, synthesising qualitative papers that reported the experiences of emergency personnel and coping strategies used to help them survive their work. A systematic search led to the inclusion of 19 studies. This synthesis describes emergency personnel's experience of their role, detachment strategies used to maintain focus on the job and the factors that can hinder this approach, resulting in distress. The ways in which the 'macho' culture associated with the emergency responder organisation can implicate social support and discussion of emotional responses is also discussed, as well as clinical and theoretical implications.

Keywords: Post-traumatic, PTSD, emergency personnel, coping, qualitative, meta-ethnography

A qualitative meta-synthesis of emergency personnel's experiences of the stressful nature of their role.

Emergency personnel, including ambulance clinicians (paramedics and Emergency Medical Technicians (EMT)), firefighters and police officers, often encounter situations that many would find traumatic, as their routine work involves daily exposure to critical incidents involving human pain and suffering. The term critical incident refers to an event that may cause an emergency worker to "experience unusually strong emotional reactions which have the potential to interfere with their ability to function either at the scene or later" (Mitchell, 1983, p.36). There is a larger body of literature on the mental health consequences for victims of traumatic events than for emergency personnel. However, emergency personnel have been shown to be vulnerable to the impact of traumatic events, highlighting the importance of research.

Research carried out in the United Kingdom by Mind found nearly nine out of ten blue light staff report having experienced stress and poor mental health at work, with workload and management pressure a major contributing factor (Mind, 2015). Additionally, 43% of emergency personnel have taken time off work to deal with mental health issues. The most frequent trauma-related difficulties in emergency responders, are Post Traumatic Stress Disorder (PTSD) (Benedek, Fullerton & Ursano, 2007; Breslau, Davis, Andreski & Peterson, 1991; Fullerton, Ursano & Wang, 2004; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995), depression (Fullerton, et al., 2004), drug and alcohol related difficulties (Donnelly & Siebert, 2009) and burnout (Alexander & Klein, 2001; Figley, 1998). Furthermore, a systematic review focusing on suicidal thoughts and behaviours in police, firefighters and EMTs found this group may be at an elevated risk (Stanley, Hom & Joiner, 2016).

Although as shown above PTSD is not the only psychological response to trauma exposure, it has been reported to be a common psychological difficulty in police officers (Haugen, Evces & Weiss, 2012), firefighters and paramedics (Beaton, Murphy, Johnson, Pike & Corneil, 1998). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V, American Psychiatric Association; APA, 2013), the PTSD criteria for a traumatic event include involvement in, witnessing, or learning about (the latter in a close associate or family member) actual or threatened death, repeated or extreme indirect exposure to aversive details of the events usually during professional duties (e.g. emergency personnel) and a response of intense fear, horror or helplessness. There have been several meta-analyses and scoping reviews of the literature regarding PTSD among first responders (Berger et al., 2011; Faust & Ven, 2014; Haugen, et al., 2012; Liu, Tarigan, Bromet & Kim, 2014). These articles highlight the sparsity of population-specific intervention studies and the enduring sequela that followed the 9/11 terrorist attacks (Liu et al., 2014). However, they do not offer insight into the experiences of staff after such experiences and how they cope. Rates of PTSD in police, firefighters and ambulance clinicians vary widely from 7% to 37% (Andrews, Joseph, Shevlin & Troop, 2006; Berger et al., 2011; Bennett et al., 2005; Clohessy & Ehlers, 1999; Jonsson, Segesten & Mattson, 2003; Harvey et al., 2016; Regehr, Hill & Glancy, 2000; Perrin et al, 2007; Saijto, Takeji & Hashimoto, 2008). Potential reasons for the widely varying prevalence rate include, a range of contexts being investigated, as many of the epidemiology around emergency mental health has accumulated from single traumatic events such as aircraft disasters (Pietrzak et al., 2013). Additionally, many of these studies have used different self-report measures and they typically refer to one traumatic event and symptoms. However, it is more common for negative outcomes in emergency personnel to be a result of a series of negative events. These rates are notably higher than the

reported national prevalence rates for the general population in the United States, which yield rates of 4% for PTSD (Kessler et al., 2003; Kessler, Chin, Demler, Merikangas & Walters, 2005).

Many studies have reported strategies that emergency personnel use to cope. These include the use of dark humour, cognitive strategies (e.g. distraction, avoidance), social support and the creation of meaning (Moran & Shakespeare-Finch, 2003; Paton & Violanti, 1996). Some coping responses (e.g. avoidance or dissociation strategies), are adaptive at the time of the event as it can help the emergency responder maintain focus (Dyregrov, 2002).

Social support may be important in supporting emotional wellbeing and reducing distress following difficult experiences (Dyregrov, 2002; Jonsson & Segesten, 2003). A meta-analysis has been carried out on the relation of perceived support to mental health among first responders (Prati & Pietrantonio, 2010), which showed that social support is significantly negatively related to mental health. This study proposed that social support may influence first responders' interpretation of the event, their attribution patterns and subsequent emotional states, whilst providing help in identifying adaptive coping strategies.

Despite exposure to numerous potentially traumatic events, the majority of emergency service personnel do not show signs of psychological distress and, in fact, some report positive effects of emergency work (Shakespeare-Finch, Smith, Gow, Embelton & Baird, 2003). This can be understood as compassion satisfaction, which has been defined as the benefits that individuals derive from working with suffering individuals. These benefits include positive feelings about helping others, contributing to the work setting and to the good of society and the pleasure from being able to do one's work well (Stamm, 2002). Whilst meta-analyses and individual quantitative studies are useful in showing relationships and prevalence, they may fail to identify

underlying mechanisms or related constructs. Therefore, it is important to consider other sources of evidence such as qualitative research.

Over the last twenty years, several qualitative studies have explored emergency personnel (firefighters, police officers, ambulance clinicians) experiences of their role and how they cope. Qualitative studies provide insight into the experiences of participants in a particular context, however there is a danger that because the findings from individual qualitative studies are not considered generalizable, they are not seen as a robust source of evidence (Estabrooks, Field & Morse, 1994). To counter this issue, qualitative studies can be systematically searched and their findings collated in a comparable way to the process of meta-analysis in quantitative studies. Although, instead of studies being reduced to a simple estimation of mean effect size (Smith & Glass, 1977), they can be compared and contrasted to provide higher level interpretations in an output termed meta-synthesis (Sandelowski, Docherty & Emden, 1997). A qualitative review may lead to a better understanding of the experiences of emergency responders as a result of repeat exposure to trauma and the impact on general wellbeing and other mental health outcomes. The aim of this review is to synthesise the qualitative evidence that examines emergency personnel's experiences of their role and the strategies they use to help them cope with the job. Whilst authors of individual studies are cautious in generalising their results, a qualitative meta-synthesis of emergency personnel's experiences of their role enables the development of a deeper understanding of these experiences and provide a more significant contribution to the evidence base. This would provide the opportunity to explore the experiences of the different emergency personnel and their coping strategies, to identify areas to be addressed as clinical implications. Therefore, in order to bring together and make sense of the increasing

research, it was decided that a qualitative meta-synthesis would be a useful addition to the evidence base.

To the best of my knowledge, no qualitative systematic reviews of research into the experiences of emergency responders regarding traumatic exposures (e.g. deaths, road traffic incidents) and coping strategies have been published. This review has chosen to focus on firefighters, police officers and ambulance clinicians, due to the often-overlapping features of their role. The decision was made not to include search and rescue personnel, as they have previously reported that they see themselves as distinct from other blue light services (Mind, 2015) and have unique features differentiating them from those services. The review is inclusive of all ranks and titles of police officers, firefighters, EMTs and paramedics. These terms will be used as general descriptors, although it is acknowledged that essential distinctions exist between these occupations, for example, the importance of rank structures.

Method

This study had three stages: (1) systematic search, (2) critical appraisal and (3) synthesis using meta-ethnography, as originally described by Noblit & Hare (1988).

Literature search

Formulating the research question

To identify the parameters of the synthesis, aided by a modified version of the PICo (population, phenomena of interest, condition or intervention and context), the literature was searched for qualitative literature on emergency responders' experiences of their job and coping strategies. Scoping searches were used to refine search terms. Table 1 shows the final set of PICo terms used in the search strategy. The final guiding definition of the meta-ethnography was

'published qualitative papers whose focus was on emergency responders' (ambulance clinicians, firefighters and police) experiences of responding to emergency events and coping strategies'.

Insert Table 1

Data sources and search strategy

A systematic search across four databases (CINAHL, PsycINFO, Pubmed and Web of Science) was conducted (searches were carried out in November 2017). Four concepts were utilised 'first responders', 'coping and stress' 'emergency' and 'qualitative' derived from database thesaurus suggestions, relevant titles already known to the researcher and suggestions from a search specialist. The search terms in Table 1 (or the Mesh term equivalent) were combined using the Boolean logic terms "or" and "and". No limits were placed on publication date. Google Scholar and the PILOTS database were searched for any additional references.

Inclusion and exclusion criteria

The following inclusion criteria were utilised:

- Papers written or available in English
- Studies using qualitative approaches (either solely or as part of a mixed-methods design)
- Studies reporting on the routine experiences of police officers, ambulance clinicians and firefighters of responding to emergencies
- Studies exploring coping strategies when responding to emergencies

Papers were excluded if they: were not qualitative; did not explicitly make a reference to experiencing or coping with emergencies; focused on organisational factors; focused on disasters; were non-peer reviewed articles such as dissertations; did not organise their results into themes or did not analyse their results; and did not include quotes.

Initially 3,114 papers were identified. Once duplicates were removed, titles and abstracts of the papers were reviewed for relevance. This resulted in 48 papers which were reviewed in full against the inclusion criteria; a further 31 papers were excluded at this stage. Four papers were identified that referred to the same participant groups. The published work of Regehr and colleagues included a study focusing on organisational factors (Regehr & Millar, 2007) and a study focusing on the experiences of critical incidents (Regehr, Goldberg & Hughes, 2002). Similarly, data published by Halpern and colleagues were represented in two qualitative studies (Halpern, Gurevich, Schwartz & Brazeau, 2008; Halpern, Gurevich, Schwartz & Brazeau, 2009). As the papers focused on different aspects of the data, the decision was made to include all four of the papers. A hand search of reference sections of the full papers was also completed, which resulted in one additional paper (Elmqvist, Brunt, Fridlund & Ekebergh, 2010) being identified. A total of 19 papers met the inclusion criteria and were included in the meta-synthesis. See Figure 1. for a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram of the process.

Insert Figure 1

Papers identified for synthesis

19 papers were identified for inclusion in the synthesis (see Table 2). Most studies focused on the experiences of one occupational group, with one study including more than one occupational group (Elmqvist et al., 2010). Four papers did not report gender, across the other 15 papers 77.7% of the participants were male. The papers included experiences of emergency personnel from a variety of countries. Three papers were conducted in the UK, seven in Sweden, four in Canada, one in New Zealand, two in USA, one in Israel and one in Ireland. 12 studies

used a semi-structured interview for data collection, 3 used a focus group and semi-structured interviews, 2 studies used unstructured and open-ended interviews, one used an open-ended question at the end of a survey and two studies used a mixed method of quantitative questionnaires and semi-structured interviews. The studies used an array of data analysis types, five of the selected studies used unspecified qualitative analysis methods, five used thematic analysis, one used Interpretative Phenomenological Analysis (IPA), one used free association narrative interviewing, two used the critical incident technique, two used phenomenological analysis, one used hermeneutic interpretation, and two used ethnographic content analysis.

Insert Table 2

Critical appraisal of papers

The quality of studies was rated using the Critical Appraisal Skills Programme (CASP; Critical Appraisal Skills Programme, 2018). The CASP measures quality of papers across ten domains that are considered vital in qualitative research. The CASP was chosen due to its use in other qualitative research (e.g. Campbell et al., 2003), its concise nature and the relevance of the questions to this type of research. Papers were assessed with the CASP using the three-point rating system developed by Duggleby et al. (2010). A weak score (1 point) was assigned to articles that offered little to no justification or explanation for a particular issue, a moderate score (2 points) was assigned to articles that addressed the issue but did not fully elaborate on it. A strong score (3 points) was assigned to articles that extensively justified and explained the issue at hand. Tension between reporting quality and relevance has been acknowledged by others (Dixon-Woods et al., 2007), including authors of studies that have not incorporated a formal appraisal tool (Smith, Pope & Botha, 2005). Therefore, in addition to giving papers a numerical

score, based on the approach of Dixon-Woods et al. (2007) and subsequently used by Malpass et al. (2009), the CASP checklist was also used to identify papers as KP (a key paper that is conceptually rich and could potentially make an important contribution), SAT (a satisfactory paper) or FF (a paper that is fatally-flawed methodologically). The researcher was reluctant to exclude a paper based on quality as it may still be relevant to the synthesis. Therefore, the decision was made to conduct the analysis with all papers and to determine whether those rated as SAT or FF made differing contributions to the synthesis. This replicates the methodology of other meta-ethnographies (e.g. Malpass, et al., 2009; Malpass et al., 2011) and allows the opportunity for any unique findings in studies of a lower quality to be critically examined. Twelve papers were rated as KP and 7 as SAT, no papers were rated as FF (see Table 2). Table 3 details the CASP summary of scores of each paper.

Analysis and synthesis

The method of meta-ethnography developed by Noblit & Hare (1988) was followed to complete the meta-synthesis, alongside a worked example adapted for health research (Britten et al., 2002). Meta-ethnography focuses on the “translation of qualitative studies into one another” (Noblit & Hare, 1988, p. 25). It has the final objective of developing new interpretations and conceptual insights. The synthesis includes a translation of studies into one another which encourages the researcher to understand and transfer ideas, concepts and metaphors across different studies. As in the Britten et al (2002) paper this study used concepts instead of metaphors proposed by Noblit & Hare (1988).

The analysis process began with reading and re-reading each paper to identify the main concepts. Themes and second order interpretations from each paper were then collated into a grid in Microsoft 'Excel', using the original language of the authors, as well as contextual factors

such as the study aims, participants and type of responder; this provided a context for the interpretations and explanations for each study. Sorting the second order constructs allowed for the translation of concepts between papers. This was done by considering each cell of the grid in turn and ensuring that the concepts were encompassed by the key concept used to label that row of the grid. A narrative translation was then written that captured the essence of each of the concepts as they appeared in the papers. These were then used to create a coherent narrative reflecting emergency personnel's experience of responding to emergencies and coping strategies used.

From reading the concepts off the grid it was possible to establish how the 19 studies were related. The researcher used Schutz's notion of first and second-order constructs, as used in Britten et al.'s (2002) paper. The term first-order construct refers to the everyday understandings of people and the term second-order constructs refer to the constructs of the social sciences. In Schutz's terms second-order constructs are the building blocks of the synthesis from which third-order interpretations are constructed. Where experiences differed between or within papers, moving between the narrative translations and the original papers allowed for interpretations to be made regarding possible sources of variation. These were then linked together in a line of argument that accounted for the emergency responders' varied experiences of their role in response to different aspects of the job. From the second-order interpretations, several third-order interpretations were constructed.

Results

Following the process previously described, seven core concepts emerged from this meta-synthesis: 'feelings of inadequacy and uncertainty', 'macho culture', 'identification', 'impact of the job', 'hardening to the job', 'detachment and dehumanisation', and 'coping strategies

following the job'. Table 4 gives a narrative 'translation' of each second order construct, which explicitly shows how the concepts across the papers compared with each other.

Insert Table 3

Feelings of inadequacy and uncertainty

Feelings of inadequacy and uncertainty were described as commonplace amongst participants, particularly when things felt out of their control and they did not feel prepared professionally or personally. For example, when care-giving had to be extended from the patient to distressed family members, "there is a mom next to the child and she is really sad, and I do not know what to do for her, and I have to try and be sufficient for them both" (Nordén, Hult & Engström, 2014, p. 77). This meant that care changed from a systematic approach (well-structured guidance) to a situational response, leading to uncertainty on how to extend focus from the patient to the family members, particularly in jobs involving children.

Emergency responders felt a heightened sense of inadequacy and fear in cases involving children, partly due to feeling unprepared because of their rarity. They experienced an increased feeling of responsibility and pressure to be more focused, do everything perfectly, subsequently increasing stress, "then you get performance anxiety, because you really want to do well, if there is any time you want to do everything absolutely right, it's when you have a small child" (Nordén, et al., 2014, p. 77). This was due to these jobs commonly involving distressed parents, and trying to keep both the child and parent calm, whilst involving the parent in the child's care and having to relay information in an accessible way for both. The presence of parents was distressing and hindered their ability to detach emotionally (Avraham, et al., 2014).

Feelings of helplessness were associated with increased feelings of responsibility regarding the survival of patients (Avraham, et al., 2014). The death of patients evoked strong feelings of powerlessness, which had implications for professional identity. An ambulance worker described this as “not being able to do what we were supposed to do. That’s save somebody’s life” (Halpern, et al., 2009, p.179). Feelings of helplessness could lead to guilt and questioning their decisions on the job which threatened their professional competence “maybe if we’d done things differently, we could have saved her, you know. Kind of a guilt feeling too” (Halpern, et al., 2009, p.181).

Cases of suicide, in particular evoked feelings of helplessness (Koch, 2010; Gallagher & McGilloway, 2008) as there was nothing more they could do. Faith was used to relieve anxiety and to reduce feelings of helplessness, when attending to completed suicides (Koch, 2010).

Macho Culture

In all professions, participants described experiencing a ‘macho’ culture in their profession which emphasised “getting on with it”, dissuading workers from discussing their concerns and fears, due to fears of stigma and appearing weak (Halpern, Gurevich, Schwartz & Brazeau, 2009; Regehr et al., 2002; Regehr & Millar, 2007). This culture was described as a barrier to seeking support due to ‘fears of discovery’ (Gallagher & McGilloway, 2008, p.220). Seeking support was seen as admitting to failure and implies you are not able to cope, which could jeopardise their positions (Gallagher & McGilloway, 2008; Haslam & Mallon, 2003).

In the police force, these feelings appeared to be heightened as being calm and dispassionate in emotive incidents was described as important for respect and reputation and telling people how you feel may have implications for this, “I think there’s a real element of machismo and masculinity in the police force and it’s a bit, sort of a faux pas to admit that things

have really affected you... I think you're straying into pink and fluffy territory there" (Evans, et al., 2013, p.3). Not expressing feelings was described as a conscious choice, inspired and reinforced by police culture. As one participant put it, "You don't talk about the emotional aspect. It's institutionalised. It's absolutely part of the culture. You have to be tough. You are a man" (Koch, 2010, p.93). As it is their job to enforce the law, it was described that expressing feelings was a sign of weakness and that others may take advantage of their emotionality or other police officers may see them as less reliable and trustworthy.

Female ambulance clinicians reflected that it could be difficult to be part of a profession that had been typically dominated by men, meaning they were required to adopt masculine qualities, such as being perceived to be tough and engage in 'male-focused banter' (Clompus & Albarran, 2016), which could have implications for sharing emotions.

Identification

A job could become more distressing when emergency personnel identified with a victim. This could occur when they connected or empathised with a person's character, such as being a similar age, or experiencing a similar situation as the victim. This could remind them of their own or their family's vulnerability, as one participant put it "You start thinking that it will happen to you, some kind of CVA [cerebrovascular accident]. There's nothing more frightening than that" (Avraham, et al., 2014, p.200). When the patient's family members were distressed or grieving, this could promote an empathic response and understanding of the family's needs, which could be emotionally difficult, "You get a totally different feeling of empathy when you can identify with them in that way, and of course you feel at the same time as doing that, it takes a lot more energy" (Bremer, Dahlberg & Sandman, 2012, p.47).

Extending on suicide resulting in 'feelings of inadequacy and uncertainty', participants could also feel anger and sadness due to thinking about what that person left behind and the grief they have caused to their family, "you killed yourself and know that your daughter was going to come home and find you. And that upsets a lot of people. That really upsets me, when a kid finds them" (Koch, 2010, p.95); "the family were there and they were all upset and the more I stayed with them... I just had to walk away otherwise I would have cracked up over it" (Gallagher & McGilloway, 2008, p.217). In contrast to this, in cases of suicide and other jobs, when unable to help the patient, connecting and supporting the family members could give meaning to the job and reduce difficult feelings (Bremer, Dahlberg & Sandman, 2012; Koch, 2010).

The incidents most commonly identified with involved children. This was due to a sense of familiarity and being able to relate through their role as a parent, "I started to cry and understood in a completely different way the parents' feelings for the child" (Jonsson & Segesten, 2003, p.147). As described in the 'feelings of inadequacy and uncertainty' concept, these jobs commonly involved distressed parents. Participants described feelings extending from 'inadequacy and uncertainty', to contextualising the person in a relationship with others, heightening feelings of empathy, and hindering their ability to detach emotionally. These jobs were also more difficult to ascertain meaning from and difficult to understand, particularly in instances of child abuse (Halpern et al., 2009). This also led to heightened feelings of 'what if' and wishing something different or more could have been done to save the child.

Impact of the job

Being intensely focused whilst on a job, meant emergency personnel only processed what happened after handing over responsibility, "working with the patient you are so focused on what

you have to do so it's only afterward that you really think" (Jonsson & Segesten, 2003, p.146).

After the job, they felt a need to relieve the tension and emotions,

It was probably when I was alone, when I sat down in the car and felt some sort of fear...it was probably then that I for the first time felt, because before then I'd had people around me all the time...it was there I started to cry. (Elmqvist et al., 2010, p.270).

They could be affected by stressful events for a prolonged period, "It was literally months before I could drive by that building without crying" (Regehr et al., 2002, p.508). This could involve experiencing post-traumatic stress symptoms such as intrusive memories, inability to sleep, and nightmares. As one participant described, "I'd go to bed, I'd close my eyes and there would be the lady doing a swan dive off the balcony again, as clearly as you sitting in front of me" (Regehr et al., 2002, p.508). There was also an element of not recognising that a stressful event had such a big impact on them, "and I realised about a year later that the call really messed me up for a year" (Halpern, Gurevich, Schwartz & Brazeau, 2007, p.143).

Participants described how it could be difficult to separate work from home, with work impacting on their off-duty lives, including relationships. The authors interpreted this as being due to the detachment strategies, which can make it difficult to shift to openness in close relationships (Koch, 2010). This was particularly experienced by police officers, as they described being "always a cop" meaning that they were always hyper-alert (Koch, 2010) and could not fully relax due to the vulnerability this may cause.

Although many people talked about the negative impact of the job, two studies described the feelings of personal and professional growth, empowerment and increased self-esteem from their exposure to traumatic incidents (Avraham et al., 2014; Elmqvist et al., 2010). This particularly happened when they felt they had been in control, "The moment you feel as if you

have treated someone well, you even breathe a sigh of relief...you feel good about yourself...I feel as if I know what is happening...I feel a degree of calm and lessening of all that tension I was in" (Avraham et al., 2014, p.200). However, although the increasingly complex and demanding nature of their work could be satisfying and rewarding, the introduction of health-service reforms, felt overwhelming. For example, the combination of target driven policies, increased pressure of workload, introduction of performance management and resource constraints felt it was having a detrimental effect on their caring role and could subsequently impact on their health, "I wasn't sleeping properly at all because I was so worried about work and I was really tearful" (Clompus & Albarran, 2016, p.4). The demands of work pace could also interact with the psychological demands of dealing with traumatic situations, which leaves little time for physical rest or psychologically processing of traumatic events (Regehr & Millar, 2007).

Hardening to the job

Participants described that being repeatedly exposed to traumatic events had a hardening and desensitising effect, which could have negative consequences. This could include a reduced capacity to feel empathy for those they care for professionally but also in personal relationships. This differed from conscious strategies used to keep themselves detached and was an outcome of repeated exposure to traumatic events. They described having an altered perception of what is normal and different reactions to events as other people, "well, I mean, after you see enough people die and enough carnage, you go "oh well" ... You don't really say, "oh that's terrible". Like my wife will say, "oh that's horrible" ... Well I mean you start getting cold" (Jahnke, Poston, Haddock & Murphy, 2016, p.741). Additionally, this desensitisation and different frame of reference could create conflict outside of work, "when something happens outside this job, your reaction is a stark contrast to what your spouse or family would think a normal person's

reaction would be...I should be really upset, and I'm not" (Jahnke et al., 2016, p.741). This could also impact on relationships due to feeling an emotionally deficit, "you almost treat your spouse like another call" (Regehr & Millar, 2007, p. 56).

Participants described needing to detach from work experiences at home. One participant described this as getting easier with experience, "of course it happens at first [that emotions are aroused]. You get hysterical at home and maybe a bit depressed. But that is when you are a beginner, and later, you get used to it" (Avraham et al., 2014, p.200).

However, staff also described the cumulative nature of incidents having a negative impact on mental health and a reduced capacity to handle traumatic events as experience increases, which could lead to depression and substance use, "just the stress that follows stress. You know, just any call that day that's hard to shake and you collect that over a career. You know it doesn't go away" (Jahnke et al., 2016, p.740). This had also resulted in increased cynicism and irritability towards people, "it just makes you way more cynical in your personal life... I'm far more aggressive with people than I was five years ago" (Jahnke et al., 2016, p.741). This was also seen in response to increasing workloads, particularly non-emergency calls. This included patients with mental health or alcohol-related problems and individuals with 'social' rather than medical problems, which could affect feelings towards patients,

I've lost a lot of my compassion... whether this is compassion fatigue or what have you... I wouldn't say I am angry with them... It's more the people that get drunk and lie in the street and won't get up and I think "oh for goodness sake" (Clompus & Albarraan, 2016, p.4).

Some participants described how death and tragedy was part of the job and they had divergent beliefs about the impact of emotions on the job, describing themselves as "cold-

hearted”, “in my head, the person’s dead... And I’ll say ‘I’m sorry, your loved ones had died’ And I’m not sorry in the slightest... I don’t emotionally engage” (Anderson et al., 2017, p.4).

Detachment and dehumanisation

Differing from the described experiences in the ‘hardening to the job’ concept, staff described a range of coping strategies they consciously used and were in control of, in responding to routine and more challenging aspects of their workload to help deal with the emotional intensity of their work. However, they were able to reengage with the emotions evoked following the incident.

This involved adopting ‘distancing’ strategies to protect themselves from the effects of potentially distressing incidents (Evans, et al., 2013). These strategies enhanced their ability to function as they helped to maintain focus, “It’s that armour and I don’t know how else you would deal with it, you’ve got to... it sounds so callous, but you’ve got to detach yourself” (Evans, et al., 2013, p.3). A strategy commonly used was focusing on the task and following a systemic course of action. If they knew that a job was going to be particularly traumatic they would familiarise themselves with procedures on the way to respond, as a way of preparing for an event and blocking emotions (Avraham, et al., 2014). By staying in their role and following an action-orientated stance they could de-personalise the victim and seeing a patient as a job to do rather than as a human. Some participants described trying to see the victim as a “piece of meat” or a “Mannequin”, to help de-personalise them further (Koch, 2010).

Coping strategies after the job

Participants also employed coping strategies following the job. It was acknowledged that talking was helpful and essential, but it could be risky as it was difficult to know who to trust. As seen in the ‘macho culture’ concept, there was a concern that seeking support could have a

detrimental effect on their reputation and job prospects, as there was suspicion about the rationale of formal opportunities to talk and whether they were in place to detect and monitor “weak” individuals. Additionally, they could feel unsupported by supervisors, heightened when supervisors questioned participants as to why they were finding an event distressing, “wasn’t really much sympathy... ‘this wasn’t a huge accident, you weren’t injured, you know, really why are you complaining’” (Regehr & Millar, 2007, p. 54-55). However, supervisors felt that they had to be careful in what they say or do, which requires an ability to recognise and empathise with emotions (Regehr & Millar, 2007). This is difficult particularly, as described in the concept ‘Macho Culture’, when ambulance clinicians are mistrustful of formal support, “I may hang around, not in their face, but I’ll be there, and I find, you may see them standing off to the side. If you approach them they walk away. Okay give them time... I know that’s the worst thing you can say, are you okay?” (Halpern, Gurevich, Schwartz & Brazeau, 2009, p. 144).

Participants described how when they do talk it is often “matter of fact talk” without going “too deep into emotional content” (Evans et al., 2013, p.5). Talking to colleagues was described as important because they understood, it reduced feelings of isolation and shame and provided an outlet for emotion and processing traumatic events. They described reflecting on the event to receive constructive guidance on their performance, which increased confidence, personal development and their sense of control in similar situations (Avraham et al., 2014; Bohström, Carlström, & Sjöström, 2017; Clompus & Albarran, 2016).

Humour was used in discussing difficult situations, helping to provide support and maintain team camaraderie. It could alter perceptions of an event, change the emotional response and memory to limit negative consequences,

[Humour] makes the incident feel less serious, I suppose... you just diffuse from it, have a little joke about it and then you're on to the next one [incident]. Whereas we probably prolong it a little bit more, talking about it more seriously (Evans et al., 2013, p.5).

Some participants described wanting to find out what happened to the patient after responsibility was handed over. This included compensatory acts (e.g. attending funerals, visiting patients in hospital) to cope with feelings of inability to help, to try to find meaning and to reassure themselves they had done everything they could (Halpern et al., 2009; Jonsson & Segesten, 2003). Participants from the fire service described frustration at the lack of follow-up information, "we are not included in the health care staff and therefore not informed about the consequences for the patients we have tried to rescue for hours in a drowning accident" (Jacobsson, Backteman-Erlanson, Brulin & Hörnsten, 2015, p.102).

Family and friends were reported as sources of support, however, some participants avoided speaking to partners due to fears that they would "let go" which is something they were uncomfortable with. They also described being reluctant to burden their families, "I never tell my wife that...because I just think that would have really put the frighteners on her" (Evans, et al., 2013, p.6). There was also an element of wanting to keep work and home separate to "have a break" and protect themselves from burnout, "You want to do something else, talk about something else, when you get home. You want to play ball with the kids or something else. It's at work, leave it there" (Koch, 2010, p.95). This could often include distraction and trying not to think about the job, "I think my response normally was just to push aside that thought as quickly as possible and move on" (Halpern et al., 2009, p.183).

Discussion

The aim of this review was to synthesise studies exploring emergency personnel's experience of their jobs and the way they cope. The synthesis of the 19 papers, derived seven concepts.

The first concept 'feelings of inadequacy and uncertainty' captured emergency personnel's reflections upon when they felt unprepared, unable to help or things felt out of their control, leading to them feeling like they have failed. This was heightened in jobs involving infants, children and young patients, due to increased responsibility and also when the chances of saving them were very slight or non-existent, such as in cases of suicide (Dyregrov & Mitchell, 1992; Halpern et al., 2009; Jonsson & Segesten, 2003). Feelings of guilt can arise from thinking that they should have thought, felt or acted differently based on a set of internalised values (Jonsson & Segesten, 2004; Kubany, 1994). Emergency responders want to help the patient using their professional skills and training, and not being able to do this could lead to undermining of professional competence and repeated self-reflection regarding their functioning during the event. This can arouse fear of their own vulnerable feelings, which may mean they cannot maintain distance between themselves and the patient.

This difficulty was further demonstrated in the identification concept. Identification with victims of injury (particularly children) can be a strong predictor of post-traumatic stress symptomology (Dyregrov, 2002). Participants described jobs involving children being particularly difficult, especially if they had children of their own. This was heightened when responding to situations where participants were reminded of their own family members. Additionally, often present at these jobs were distressed parents meaning they would have to extend care and could experience feelings of empathy towards them, having implications for

detachment. Empathising with families and patients, meant they could build a rapport with them, which could contribute to job satisfaction. Attending more trauma-based jobs can require more technical skills but a limited connection to the patient, making detachment easier. However, routine work can demand more empathic caring skills and therefore be more problematic. Therefore, it is important to have a balanced approach to ensure clear decision-making in emotionally challenging situations.

Identification could lead to increased feelings of distress, including PTSD symptoms, following the job as seen in the concept 'impact of the job'. This is in line with previous research that indicates the subjective experience of intense fear, helplessness or horror in response to critical incidents can contribute to the development of PTSD symptoms (Declercq, Meganck, Deheegher, & Van Hoorde, 2011). According to DSM-V criteria, to develop PTSD, you do not have to directly experience the traumatic event (APA, 2013), which is typical of emergency personnel roles.

Participants also described experiencing satisfaction and self-worth from their work, particularly when they experienced a sense of control in a situation, when they succeeded in saving the life of the patient or the patient responded well to treatment. This could have contributed to their feeling of being appreciated (Wallerstedt, Benzein & Andershed, 2011) and self-confidence (Elmqvist, et al., 2010). Professional identity is defined as a self-image that enables personal harmony and a sense of satisfaction from professional activities (Trede, Macklin & Bridges, 2011). This develops when a professional acts in accordance with society's expectation of a person filling that role (Paterson, Higgs, Wilcox & Villeneuve, 2002). However, when a person feels they cannot do this, this leads to vulnerability.

As seen in the concept 'detachment and dehumanisation', emergency personnel employ strategies, which this review has demonstrated is vital to help them to survive the demands of their work. A common strategy was 'detachment', employed to protect themselves through adopting a professional and technical approach to work and decision-making. Coping strategies of detachment helps to feel objectively distant from a situation (Kirby, Shakespeare-Finch & Palk, 2011; Thompson & Suzuki, 1991).

Emergency personnel are exposed to events which force them to confront their own fears of ageing, dying and illness. This could mean that these fears were difficult to contemplate and even repressed daily. However, detachment can lead first responders to seeing patients as 'outsiders', alongside a belief that they are immune from ever becoming a patient themselves. This could lead to cynical or hostile attitudes, which can encourage dehumanisation, and have a negative impact on patient care (Haque & Waytz, 2012).

Denial of extreme feelings is a short-term measure for dealing with extreme emotions (Adshead, 2010) and use of strategies such as suppression of emotions alongside avoidance of thinking of stressful incidents are a significant predictor of burnout and compassion fatigue (Alexander & Klein, 2010; Cicognani, Pietrantonio, Palestini & Prati, 2009). When using strategies of detachment, 're-engaging' with the reality of the challenging experience is essential (Sharkansky et al., 2000), as not re-engaging can be counterproductive to coming to terms with traumatic memories. It has been suggested that to leave the stressful experience behind it is essential to talk to other people about the experience (Jonsson & Segesten, 2004).

As seen in the concept 'coping following the job', talking to colleagues was a valuable resource to help cope with the traumatic exposure of their job which commonly included feedback and the use of humour. Humour can be a way of breaking up the horrible reality of the

event and lower the emotional intensity (Moran & Shakespeare-Finch, 2003; Rosenberg, 1991), which may help maintain supportive interactions (Bonanno & Keltner, 1997; Fredrickson & Levenson, 1998), dehumanise the event and feel objectively distant to what they have witnessed or experienced (Mildenhall, 2012). This was also seen in 'factual talk', as being objective or facilitating objectivity plays a central role in reducing psychological distress (Beck, Rush, Shaw & Emery, 1979). Talking with colleagues could help to meet their need to process the experience and understand what had occurred, to learn lessons and draw conclusions for the future (Elmqvist et al., 2010; Jonsson & Segesten, 2003; Regehr et al., 2002). This meant they could reflect on the event and relieve the emotional burden, reassuring them that they had acted correctly, perceiving the event as a learning experience, granting them a new sense of control of the situation as well as increasing professional confidence. However, this was generally centred on clinical decision making rather than emotions, emphasising the need for an avenue to express the impact of their work on their well-being.

Lack of social support has been shown to be the most important factor in the development of PTSD (Andrews, Brewin & Rose, 2003; Brewin, Andrews & Valentine, 2000; Ozer, Best, Lipsey & Weiss, 2008). It has been consistently found in the emergency personnel literature that social support is negatively associated with PTSD symptoms (e.g. Prati & Pietrantonio, 2010; Regehr, Hill, Knott & Sault, 2003; Varvel et al., 2007). However, as seen in the theme 'macho culture' it is not easy for emergency personnel to talk about difficult experiences in a work place that is less tolerant of psychological difficulties. Society has an expectation that emergency responders are capable of functioning efficiently in highly stressful situations, without being emotionally shaken by their work; emergency responders may have similar expectations of themselves (Miller, 1995). Feeling vulnerable may be incongruent with

their professional self-expectations and thus threaten their professional identity and self-image, which may have implications for talking about emotional reactions to jobs.

The charity Mind has highlighted the need for specialist mental health for emergency personnel and therefore launched the Blue Light Programme (Mind, 2015). As part of this, one of their key objectives is tackling stigma and discrimination. Mind commissioned initial scoping research with emergency services personnel to inform planning and delivery of the Blue Light Programme which included surveys and focus groups, with ambulance clinicians, firefighters, police officers and search and rescue. Mind's research found that discussion of mental health is not encouraged and there was a suspicion that emergency personnel would be treated differently by peers if they disclosed a mental health problem and felt people who 'fix problems' cannot be seen to have problems themselves (Mind, 2015).

Negative attitudes regarding emotional responses may be problematic as it could interfere with the individual's ability to acknowledge emotional memories associated with the trauma (Tull, Jakupcak, McFadden, & Roemer, 2007). Additionally, negative evaluations of emotions may exacerbate distress associated with traumatic events, increasing avoidance and hyper-vigilance, and hindering habituation to and processing of traumatic memories (Ehlers, Mayou & Bryant, 1998; Engelhard, Macklin, McNally, van den Hout & Arntz, 2001).

Some individuals described how they felt traumatic exposure had become easier with cumulative experiences whereas others thought it had become harder. Studies on emergency personnel have found that cumulative traumatic exposure is a weak predictor of PTSD (LaFauci Schutt & Marotta, 2011; Pole, 2008). This has been extended by some studies suggesting that more years of experience is related to a higher likelihood of reporting PTSD symptoms in emergency personnel (Corneil, Beaton., Murphy, Johnson & Pike, 1999; Jonsson, Segesten &

Mattsson, 2003), whereas others have found no relationship (e.g. Beaton, Murphy, Johnson, Pike, & Corneil, 1999). Emergency personnel are regularly exposed to stress, which over time can affect their health and wellbeing and diminish their coping abilities (O'Keeffe and Mason, 2010; Sterud, Ekeberg & Hem, 2006). It may be that the cumulative effect of traumatic exposure could increase the likelihood of burnout difficulties, heightened by perceived workload and time-pressure (Maslach, Schaufeli & Leiter, 2001). The increased workload, reduced budgets and more challenging targets may have eroded informal team support and opportunities for immediate feedback and debriefing from peers (Department of Health, 2011; Mind, 2015).

This synthesis has identified the common detachment strategies that emergency personnel use to survive the everyday traumatic exposures or critical incidents, and the experiences that hinder these detachment strategies which can result in distressing emotional responses. It has also identified the importance of social support and the concerns they have with seeking support due to the 'macho' culture, which can result in becoming desensitised.

Practical implications

An advantage of meta-synthesis research is that the findings can be used to develop evidence-based care and guide interventions. The synthesis suggests that support from colleagues or other professional staff can help with distress associated with work. However, the macho culture associated with the emergency professions can have implications for seeking support. This means that attention needs to be given to addressing the stigma that is associated with discussing common emotional reactions following a traumatic event and disclosing mental health difficulties within the emergency service workplace. This could also help alleviate the discomfort that emergency personnel feel when faced with vulnerable emotions. This review has demonstrated that detachment from patients is fundamental to how they cope with their work.

However, it is important to acknowledge and process difficult feelings and dealing with them in the aftermath may increase operational readiness. Also demonstrated in this review was the difficulty in extending care to families. This difficulty in balancing between empathising and distancing towards distressed individuals has been noted elsewhere and demonstrates a training need (Bremer et al., 2012). Education on recognising the emotions that can commonly occur during and following critical incidents, could increase emergency personnel's ability to recognise and acknowledge emotional responses, which may improve their ability to process them. In summary, by preparing emergency personnel and managers for the wide demands that may occur in their work, this may, in turn, normalise and de-stigmatise emotional responses.

Mind's research also found that 71% of emergency personnel think that their organisation does not encourage them to talk about mental health, compared to 45% of the general workplace organisation. 44% thought colleagues would be treated negatively if they disclosed a mental health problem in work. There is an under-utilisation of mental health services for emergency services (Berg, Hem, Lau & Ekeberg, 2006), which appears to be an international issue. This review extended on these findings by providing insight into the implications of a 'macho culture' has on seeking support and suppressing emotions, possibly leading to desensitisation and reduced capacity for empathy. Therefore, actions need to be taken to actively challenge mental health stigma, by encouraging a change in culture regarding this, which could be implemented by training programmes, at of the start of their career, and throughout.

Strengths and limitations

The systematic identification of the papers and the critical appraisal of each paper was only conducted by one researcher which could have reduced the rigour of the synthesis. The process of synthesising the studies is interpretive, meaning that the results are reflected by the

author's own preconceptions and experiences, which may have differed if other or more researchers were involved in the meta-synthesis.

A strength of this review is the inclusion of papers from several different countries, which potentially offers an international perspective on the experiences and coping strategies of stressful experiences in emergency personnel, however, only papers published in English were included. This study did not focus on differences in gender, as the majority of the studies included in this synthesis did not. This could be considered in future research as it could yield data that represents a qualitatively different perspective, particularly in firefighters and police officers, where females are under-represented.

This synthesis did not consider organisational factors which are likely to have implications for emergency personnel's experiences of their role. Several studies have suggested that organisational factors have greater influence than traumatic stressors in psychological well-being among emergency personnel (Kop, Euwema & Schaufeli, 1999). Additionally, firefighters, ambulance clinicians and police officers have different roles in attending to emergencies which was not considered in this synthesis. The majority of the papers included in this synthesis focused on ambulance clinicians, with only 4 papers relating to firefighters and 3 papers relating to police officers; meaning that most of the analysis is only reflective of one out of three occupational groups addressed. Despite this, this analysis offers insight into how the different occupations experience their role and the differences between them.

It is important to note that not all participants reported all of the experiences discussed in this review, and the number of papers supporting each concept varied. Instead, the review demonstrates the range of experiences emergency personnel have had in relation to their role and discusses the factors relevant to how they may have differently experienced the stressful part of

their role. Additionally, some experiences that are common such as detachment strategies, may be easier to discuss than decreased empathy for patients, which may not be as acceptable.

Conclusion

This review provides an international perspective on emergency personnel's experiences of the stressful nature of their job and how they cope with this. A significant finding was the macho culture associated with the emergency personnel's roles, which affected how they coped with day to day experiences of traumatic events associated with their work. However, detachment and dehumanisation strategies were essential for the emergency personnel to do their job. A strong organisational commitment to reducing stigma, increasing awareness of common emotional reactions to traumatic events and increasing staff support is needed through a focus on staff training and clinical supervision.

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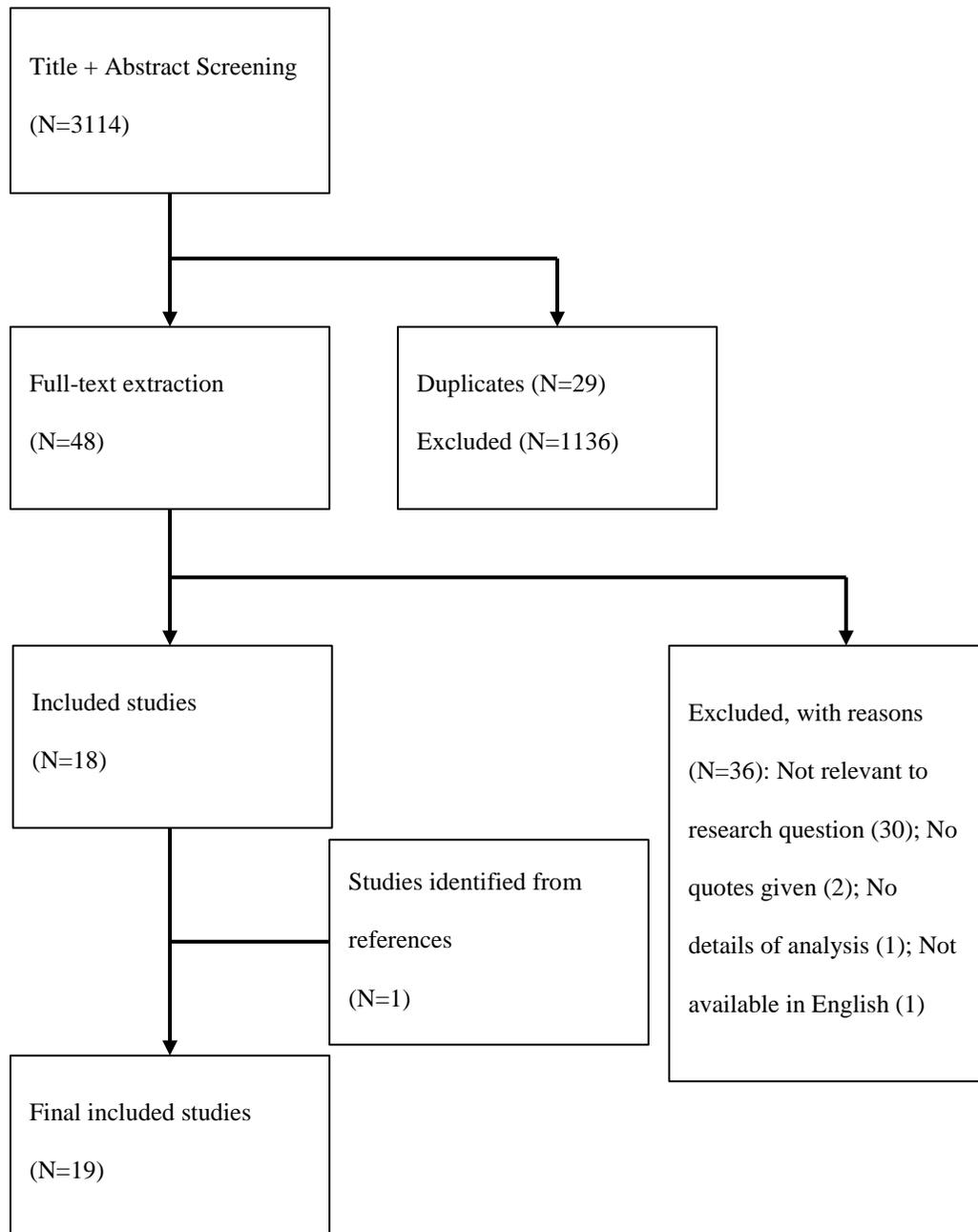
Figures and Tables**Figure 1. PRISMA Diagram**

Table 1. PICo Table

Population	Phenomenon of Interest	Context
First responders (firefighters, ambulance personnel, police officers)	Experience of stress/coping	Emergencies
paramedic*("emergency medical technicians", "allied health personnel"); police ("police personnel"); firefighter*("fire fighter*"); "first responders"; "rescue workers"; "emergency responders"	stress; coping; resilience; qualitative; attitudes; experience*; perception; opinion; view*; interview; "focus group*")	emergenc*("critical incident")

Table 2. Study characteristics of 19 papers to be synthesized

	Authors and date	Country	Sample and gender	Type of Emergency Responder	Data Collection	Type of analysis	Focus of Study	Critical Appraisal
1	Anderson, Gott & Slark (2017)	New Zealand	16 participants (8 men and 8 women)	Ambulance personnel	Interviews	IPA	Experiences of challenging resuscitation decision-making	SAT
2	Avaraham, Goldbatt & Yafe (2014)	Israel	15 participants (10 men, 5 women)	Ambulance personnel	Semi-structured interviews	Thematic analysis	Experience of encountering critical incidents and coping with them	KP
3	Bohstrom, Carlstrom & Sjostrom (2017)	Sweden	15 participants (6 men, 7 women)	Ambulance personnel	Semi-structured interviews	Critical Incident Technique	Managing stress	SAT
4	Bremer, Dahlberg & Sandman (2012)	Sweden	10 participants (5 men, 5 woman)	Ambulance personnel	Interviews	Hermeneutic interpretation	Experience of caring for families at cardiac arrest and sudden death	SAT
5	Clompus & Albarran (2016)	UK	7 Participants (2 men, 5 women)	Ambulance personnel	Interviews	Free Association Narrative Interviewing procedures	Explore the nature of resilience	KP
6	Elmqvist, Brunt, Firdlund & Ekebergh (2010)	Sweden	13 participants	Police (N=8), firefighters (N=2) and ambulance staff (N=3)	Unstructured and open-ended interview	Phenomenological analysis	Experiences of 'doing' prehospital care in response to four traumatic incidents	SAT
7	Evans, Pistrang & Billings (2013)	UK	19 participants (13 men, 6 women)	Police (Police constable, N=9; detective constable, N=9; police sergeant, N=5 and detective inspector, N=3).	Semi-structured interview	Thematic analysis	Social interactions following traumatic incidents	KP
8	Gallagher & McGilloway (2008)	Ireland	27 participants (all men)	Ambulance personnel	Semi-structured interviews	Thematic analysis	Impact of critical incidents	SAT
9	Halpern, Gurevich, Schwartz & Brazeau, (2008)	Canada	60 participants (33% women). 31 participants took part in focus groups and 29 participants took part in individual interviews	Ambulance personnel	Focus groups and semi-structured interviews	Ethnographic content analysis	Experiences of critical incidents and views regarding potential interventions	KP
10	Halpern, Gurevich, Schwartz & Brazeau (2009)	Canada	60 participants (33% women)	Ambulance personnel (Supervisors, N=4 all in individual interviews)	8 focus groups and 29 semi-structured individual interviews	Ethnographic content analysis	Emotional outcomes of what makes an incident critical	KP
11	Haslam & Mallon (2003)	UK	31 participants (90% male)	Firefighters	Interviews	Unspecified qualitative analysis	PTSD symptoms in firefighters	SAT
12	Jacobsson, Backteman-Erlanson, Brulin & Hornsten (2015)	Sweden	476 participants, 180 participants answered the open-ended question (164 men and 16 women)	Firefighters	Survey including open ended questions	Unspecified qualitative analysis	Experiences of critical incidents	KP
13	Jahnke, Walker, Poston, Haddock & Murphy (2016)	USA	? participants (not clear how many participants took part in the qualitative component)	Firefighters	Focus groups and individual interviews	Thematic analysis	Experience of repeated exposure to trauma	KP
14	Jonsson & Segesten (2003)	Sweden	223 participants	Ambulance personnel	Open ended questions	Phenomenological method	The meaning of traumatic incidents	KP

	Authors and date	Country	Sample and gender	Type of Emergency Responder	Data Collection	Type of analysis	Focus of Study	Critical Appraisal
15	Koch (2010)	USA	8 participants (all male)	Police	Semi-structured interviews	Unspecified qualitative analysis	Impact of being first responders to completed suicides	KP
16	Norden, Hult & Engstrom (2014)	Sweden	8 participants (3 men, 5 women)	Ambulance personnel	Semi-structured interviews	Unspecified qualitative analysis	Experiences of nursing critically ill and injured children	SAT
17	Regehr, Goldberg & Hughes (2002)	Canada	86 participants took part in the quantitative part of the study. 18 of these participants also took part in the qualitative part. No gender available	Ambulance personnel (32.6% of these had achieved rank of supervisor or officer)	Mixed method used qualitative and quantitative methods of data collection. Quantitative included measures looking at exposure to traumatic events, levels of social support and levels of distress. Qualitative focused on a semi-structured interview	Unspecified qualitative analysis (aided by Nvivo)	Understanding of what types of incidents are most difficult, the impact of these and coping	KP
18	Regehr & Millar, (2007)	Canada	86 participants took part in the quantitative part of the study. 17 of these participants took part in the qualitative interviews. No gender available	Ambulance personnel	Mixed method used qualitative and quantitative methods of data collection. Quantitative component included questionnaires focusing on demand, control, support and distress. The qualitative component included interviews	Thematic analysis	Perceived experiences of psychological and physical demands of the job and level of support received.	KP
19	Svensson & Fridlund (2008)	Sweden	25 participants (13 male, 12 female)	Ambulance personnel	Semi-structured interviews	Critical incident technique	Experiences and actions towards worries	SAT

Table 3. CASP checklist numerical scores

	Research design	Recruitment strategy	Data collection	Relationship between researcher and participants	Ethical issues	Data analysis	Findings	Value of research	Total
Anderson, Gott & Stark (2017)	2	2	2	1	1	2	2	2	14
Avraham, Goldblatt & Yafe (2014)	3	2	3	3	2	2	3	3	21
Bohström, Carlström & Sjöström (2017)	2	2	3	1	2	2	2	2	16
Bremer, Dahlberg & Sandman (2011)	3	1	2	1	3	2	2	2	16
Clompus & Albarran (2015)	2	2	3	2	3	2	3	3	20
Elmqvist, Brunt, Fridlund & Ekebergh (2009)	2	2	3	1	2	2	2	2	16
Evans, Pistrang & Billings (2013)	3	2	2	2	2	2	3	3	19
Gallagher & McGilloway (2008)	3	2	2	1	1	1	2	2	14
Halpern, Gurevich, Schwartz & Brazeau (2008)	3	2	3	2	2	3	3	3	21
Halpern, Gurevich, Schwartz & Brazeau (2009)	2	3	3	2	2	3	3	3	21
Haslam & Mallon (2003)	3	2	2	1	1	2	2	2	15
Jacobsson, Backetman-Erlanson, Brulin & Hörnsten (2014)	3	2	2	1	2	2	2	3	17
Jahnke, Poston, Haddock & Murphy (2016)	2	3	2	1	2	2	3	3	18
Jonsson & Segesten (2003)	3	2	3	1	2	2	2	3	18
Koch (2010)	3	2	2	1	1	2	2	3	16
Nordén, Hult & Engström (2014)	3	2	2	1	2	2	2	2	16
Regehr, Goldberg & Hughes (2002)	3	2	2	2	1	2	3	3	18
Regehr & Millar (2007)	3	2	2	1	1	2	3	3	17
Svensson & Fridlund (2008)	2	2	2	1	2	2	2	2	15

Table 4 Translation of second order constructs

Authors and date	Feelings of inadequacy and uncertainty	Macho culture	Identification	Impact of the job	Hardening to the job	Detachment and dehumanisation	Coping strategies after the job
1 Anderson, Gott & Slark (2017)	-	Pride in objectivity and described themselves as a "numbers-person"	Benefit from connecting with friends and families	-	-	Emotional dis-engagement. Connecting with friends and family	-
2 Avaraham, Goldbatt & Yafe (2014)	Feeling helpless and had no control over what happens. Feel responsibility when there is a child	-	"confronting personal fears regarding themselves and their families"	Sense of control feels good can experience "positive emotions, satisfaction" and a sense of self-worth. However, can experience "difficult thoughts and experiences even after completing treatment in critical incidents". Memories from previous stressful incidents	Being able to separate home and work gets easier with the cumulative exposure to events	Block emotions. Emotional detachment from the patients and family members, focus on the job,	Use humour. detachment from the experiences at work, separate home and work domains
3 Bohstrom, Carlstrom & Sjostrom (2017)	Lack of control, feeling that their personal competence is inadequate when dealing with seriously ill patients'. Not being skilled enough when dealing with people who they are personally acquainted with	-	-	-	-	Advantages of teamwork – 'close and fluid collaboration within these teams was deemed to prevent stress'	Support from colleagues. Talking to colleagues that had been involved with an incident with them was the 'most important factor in being able to de-stress'. Talking to colleagues more helpful than support offered by work
4 Bremer, Dahlberg & Sandman (2012)	Feelings of inadequacy when family members were distressed and "meeting their despair". Feeling responsible for both family and patient. Inadequacy increased when responsibility is extended to family members can increase the uncertainty of what is expected of them. Means that it is a transition from a well-structured guidance to a situational response.	-	Identification with family members can promote an empathic approach but can be loose energy in doing this but regain it by meaningfulness and confirmation of supporting their family when they haven't been able to help the patient. Can make it difficult to not feel overwhelmed by own feelings	-	-	Emotional detachment, a balance between managing emotions and becoming uncontained	Having feedback from colleagues, talk with "emotions, thoughts and actions".

Authors and date	Feelings of inadequacy and uncertainty	Macho culture	Identification	Impact of the job	Hardening to the job	Detachment and dehumanisation	Coping strategies after the job
5 Clompus & Albarran (2016)	-	-	-	-	-	-	-
6 Elmquist, Brunt, Firdlund & Ekebergh (2010)	-	-	Feeling drained of energy after a job made it easier for associations to own life and experiences and an "insight into life's fragility"	When the responsibility for the patient has been handed over then the "thoughts and feelings come to them". After the job and being alone have needs to relieve the tension and express the fear, anger, sorrow and frustration they had felt.	-	Strategies to distance themselves. Focus on the job at hand and follow a "systemic course of action"	Talking to peers that understand the difficult experience of being a first responder. Reflection and reassurance from others.
7 Evans, Pistrang & Billings (2013)	-	Emphasis of "getting on with it. Fears of appearing "weak" which modifies interactions and not telling people how you feel due to fear of not having respect and a damaged reputation.	Incidents that caused most distress were those that had personal relevance and reminded them of their own and families vulnerability	-	"hardening" to the effects of being repeatedly exposed to traumatic events	Adopting strategies to "harden" or distance themselves from a potentially distressing incident	Talking is seen as essential but also risky. The use of humour often used and also increased "team camaraderie". Support from colleagues and family.
8 Gallagher & McGilloy (2008)	Feeling helplessness at suicides "due in large part to overriding feelings of helplessness and the trauma and tragedy for the families involved"	No impact on their mental health but "response revealed a recurring underlying machismo"	-	Feelings of angry outbursts, sleep problems, recurring dreams and nightmares an increase in alcohol consumption, feeling alienated from other people, and an inability to relax. Intrusive thoughts of incidents and flashbacks. Irrational and over protective. Relationships negatively affected because of the job.	(Cumulative nature of critical incident having an impact on mental health)	-	-

Authors and date	Feelings of inadequacy and uncertainty	Macho culture	Identification	Impact of the job	Hardening to the job	Detachment and dehumanisation	Coping strategies after the job
9 Halpern, Gurevich, Schwartz & Brazeau (2008)	-	Discomfort with emotions can have implications for support. Feeling that they just have to get on with it and a fear of stigma and appearing weak. Also concerns regarding lack of confidentiality, expectation of lack of professional competence.	Supervisors acknowledging that EMTs may be affected when a patient resembles their loved ones but not knowing when someone is "triggered"	Realising later that a job had a significant negative impact on them.	Suppressed the emotions so much that can now not even acknowledge them due to fear of them becoming overwhelming	-	Avoid thinking or speaking about a job Importance of a timeout. Support from peers.
10 Halpern, Gurevich, Schwartz & Brazeau (2009)	Stressful when experience strong feelings of an inability or failure to help. Can have implications for their professional identity.	Avoiding emotions and replacing them with anger? "Culture of the organisation stigmatises vulnerable feelings"	-	Second guess what they had done on the job which can lead to "concerns about professional competence"	-	Keep going don't want to think about the job.	Suppressing and avoiding emotions. Seeking reassurance from colleagues and using humour. Some use compensatory acts such as attending funerals.
11 Haslam & Mallon (2003)	Avoid feelings of helplessness	"unable to seek support from the brigade due to macho image associated with the job" Felt that this was admitting to failure and could lead to sacking.	Most stressful incidents were those involving children. This was due to "innocence of children, that it was a waste of life and familiarity (having children of your own)	"Flashbacks" experienced that related to "incidents involving horrific accidents" or feelings of helplessness. Visual stimuli and smells can cause them to "flashback"	-	-	Avoid "thoughts and feelings concerned with incidents". Support from partners some did not want their colleagues to know. However, didn't want to burden. Talk to colleagues. Some support from formal supports. Use humour to cope.
12 Jacobsson, Backteman-Erlanson, Bruhn & Hornsten (2015)	Feeling inadequate when there are many injuries are people are difficult to rescue. Feeling like suicides are hard due to not feeling prepared for it and dealing with families	-	-	'affected by feelings in personal life'	-	-	-

Authors and date	Feelings of inadequacy and uncertainty	Macho culture	Identification	Impact of the job	Hardening to the job	Detachment and dehumanisation	Coping strategies after the job
13 Jahnke, Poston, Haddock & Murphy (2016)	-	-	-	Can have "flashbacks about particularly traumatic calls and intrusive thoughts about things they had experienced whilst they were on the job"	The negative affect of being repeatedly exposed to traumatic incidents. Or getting desensitised due to repeated traumatic exposure that can help them cope with the traumatic events.	"Compartmentalising the event"	Use humour with colleagues, replay it in head until it loses its emotional valence.
14 Jonsson & Segesten (2003)	Feeling unprepared. Some things such as a young person dying. Feelings of powerlessness when it 'is obvious that the helper can do nothing to alter the outcome'	-	Identification with the victim – identify as a parent, or with being young, or when the victim is someone you know. 'cause difficulties in taking a professional stance and to distance' themselves.	'impossible for the helpers to leave the stressful events behind'. Can have intrusive memories. Only after the job do you have chance to think.	-	Focus only on the event so that they 'totally distance themselves	Talk to others about their experiences to help cope and gain understanding
15 Koch (2010)	Often experience helplessness at the scene of a suicide as "there is very little they can do"	Feelings are not seen in a positive light and can get in the way of doing the job. It is a "conscious choice, inspired and reinforced by police culture not to express feelings". Expressing feelings is seen as weak	"Becoming familiar with the personality of the victims increases the discomfort"	Not to allow feelings of any kind even when off-duty. Involvement of "moral judgements"	-	"stay in role and do the job". Blocking feelings, de-personalising and de-humanising the victim.	Feeling angry rather than feeling other emotions, talk to colleagues and the use of humour. Protect family members from their job. Learn more about the victim or engage with the survivors.
16 Norden, Hult & Engstrom (2014)	When dealing with a child have feelings of inadequacy particularly when there are parents involved. Want to do everything absolutely right. Feel unprepared.	-	-	-	-	Prepared on the way to a job involving child by going over protocol etc.	Share thoughts and feelings colleagues

Authors and date	Feelings of inadequacy and uncertainty	Macho culture	Identification	Impact of the job	Hardening to the job	Detachment and dehumanisation	Coping strategies after the job
17 Regehr, Goldberg & Hughes (2002)	-	"Macho atmosphere that discouraged individuals from discussing fears and concerns	Most traumatic events involve suicide and children or dealing with the grief of others	Post-traumatic symptoms such as intrusive thoughts, insomnia, and 'flashbacks'	(reduced capacity to handle traumatic events) Described themselves as "cold" and "heartless" Can feel emotionally distant and disengaged from family members	Focus on the job, Emotionally distance oneself from the job, block emotions	Reassurance from colleagues, tried to get reassurance from other colleagues, control over aspects of life, talk to family, help from organisation
18 Regehr & Millar (2007)	-	Suspicious regarding supervisor, they will fire you if you make mistakes having implications for seeking support	-	Reduced capacity to handle stressful events, depression, relationship problems and substance use. Not enough time for time outs due to workload. Made to feel silly for wanting time out.	-	-	Support from peers helped to cope with the stress. Supervisors were deemed to not be supportive and did not understand that different events may affect people. Supervisors reflected this may be due to workload and burnout of supervisors. Psychology support was seen to be helpful.
19 Svensson & Fridlund (2008)	-	Being part of the profession that is traditionally dominated by males means that female paramedics adopt masculine qualities	Patients could provoke childhood and family memories which could be "comforting or distressing". Dealing with children can be most difficult as it can relate with being parents	-	-	Detach themselves, block of feelings	Feedback from colleagues, use of humour, peer support, support from families and friends. However, also do not want to burden families.

Appendix A

Table 5. Synthesis; including concepts and second & third-order interpretations

Concepts	Second-order interpretations	Third-order interpretations
FEELING OF INADEQUACY/UNCERTAINTY: failure; doubting professional competency; out of their control	Doubting themselves on the job	
MACHO CULTURE: emotions can damage reputation; stigma; suspicion of admitting distress	Feeling emotions is not respected and can damage a reputation regarding professional competence	
IDENTIFICATION: empathy and compassion for victim; your own or your family's vulnerability; increased responsibility	Feeling empathy and compassion for of loved ones or awareness of the vulnerability of life which can lead to an increased responsibility	Empathy and compassion for the victim's family can create meaning and help when they were not able to help the victim
IMPACT OF THE JOB: difficult feelings following a job; rumination; second-guessing actions	Even when coping strategies are used, following the event is when the reality of the event hits them	A feeling of an inability to help can cause them to second guess themselves on the following jobs – heightening their distress
HARDENING TO THE JOB: less/more difficult with repeated exposure, cold-hearted, more cynical	Desensitisation and become 'cold-hearted' from repeated exposure to traumatic events or find it more difficult with more exposure to traumatic events	
DETACHMENT AND DEHUMANISATION: detachment; suppress emotions; focus on the job	Use cognitive and emotional strategies to focus on the job and be able to do it without getting overwhelmed by emotions	Not being able to use a systematic approach can increase feelings of inadequacy/helplessness as things can feel out of control
COPING STRATEGIES FOLLOWING THE JOB: try to get closure; talking to peers and families; factual not emotional talk; humour; avoid/distract; formal support	Use coping strategies following distressing events to try and move on and learn from the event	The macho culture associated with the profession can have implications for the coping strategies used

Working definition of concepts, 2nd and 3rd order interpretations (Britten et al., 2002; Malpass et al., 2009): *Concepts– Emergency personnel's views, accounts and interpretations of their experiences of their role; Second order interpretations – The author's views and interpretations (expressed in terms of themes and concepts) of emergency personnel's experiences of their role; Third order interpretations – The views and interpretations of the researcher carrying out the synthesis (expressed in terms of themes and key concepts)*

Appendix B

Journal of Traumatic Stress author guidelines

Author Guidelines

1. **Online Submissions:** The *Journal of Traumatic Stress* accepts submission of manuscripts online at:

<http://mc.manuscriptcentral.com/jots>

Information about how to create an account or submit a manuscript may be found online on the Manuscript Central homepage in the "User Tutorials" section or, on the Author Dashboard, via the "Help" menu in the upper right corner of the screen. Personal assistance also is available by calling 434-964-4100.

2. **Article Formats:** Three article formats are accepted for consideration by JTS. All page counts should include references, tables, and figures. *Regular articles* (30 pages maximum, inclusive of all text, abstract, references, tables, and figures) include research studies, quantitative systematic reviews, and theoretical articles. Purely descriptive articles or narrative-based literature reviews are rarely accepted. In extraordinary circumstances, the editors may consider longer manuscripts that describe highly complex designs or statistical procedures but authors should seek approval prior to submitting manuscripts longer than 30 pages. *Brief reports* (18 pages maximum) are appropriate for pilot studies or uncontrolled trials of an intervention, preliminary data on a new problem or population, condensed findings from a study that does not merit a full article, or methodologically oriented papers that replicate findings in new populations or report preliminary data on new instruments. *Commentaries* (1,000 words or less) involve responses to previously published articles or, occasionally, invited essays on a professional or scientific topic of general interest. Response commentaries, submitted no later than 8 weeks after the original article is published (12 weeks if outside the U.S.), must be content-directed and use tactful language. The original author is given the opportunity to respond to accepted commentaries.
3. **Double-Blind Review:** As of January 1, 2017, the Journal of Traumatic Stress utilizes a double-blind review process in which reviewers receive manuscripts with no authors' names or affiliations listed in order to ensure unbiased review. To facilitate blinded review, the title page should be uploaded as a separate document from the body of the manuscript, identified as "Title Page," and should include the title of the article, the running head (maximum 50 characters) in uppercase flush left, author(s) byline and institutional affiliation, and author note (see pp. 23-25 of the APA 6th ed. manual). Within the main body of the manuscript, tables, and figures, authors should ensure that any identifying information (i.e., author names, affiliations, institutions where the work was performed, university whose ethics committee approved the project) is blinded; a simple way to accomplish this is by replacing the identifying text with the phrase "[edited out for blind review]". In addition, language should be used that avoids revealing the identity of the authors; e.g., rather than stating, "In other research by our lab (Bennett & Kerig, 2014), we found ..." use phrases such as, "In a previous study, Bennett and Kerig (2014) found ..." Please note that if you have uploaded the files correctly, you will **not** be able to view the title page in the PDF and HTML proofs of your manuscript; however, the Editor and JTS editorial office staff can view this information.

4. **Preferred and Non-Preferred Reviewers:** During the submission process, authors may suggest the names of preferred reviewers; authors also may request that specific individuals not be selected as reviewers.
5. **Publication Style:** JTS follows the style recommendations of the 2010 *Publication Manual of the American Psychological Association* (APA; 6th edition) and submitted manuscripts must conform to these formatting guidelines. Manuscripts should use non-sexist language. Manuscripts must be formatted using letter or A4 page size, with 1 inch (2.54 cm) margins on all sides, Times New Roman 12 point font (except for figures, which should be in 12 point Arial font), and double-spacing for text, tables, references, and figures. Submit your manuscript in .doc or .docx format.

For assistance with APA style, in addition to consulting the manual itself, please note these helpful online sources that are freely available: <http://www.apastyle.org/learn/tutorials/basicstutorial.aspx> and <https://owl.english.purdue.edu/owl/section/2/10/> .

6. **APA and JTS Style Pointers:** In addition to consulting the APA 6th edition Publication Manual, the resources indexed above, and the JTS Style Sheet posted online, please consider these pointers when formatting each section of the manuscript:
 - a. **Tense:** Throughout the manuscript, please use past tense for everything that has already happened, including the collection and analyses of the data being reported.
 - b. **Abstract:** The Main Document of the manuscript should begin with an abstract no longer than 250 words, placed on a separate page. In addition, JTS house style requires the reporting of an effect size for each finding discussed in the abstract; if there are many findings, present the range.
 - c. **Participants:** Please include in this subsection of the Method section information on sample characteristics, subsample comparisons, and analyses that describe the sample but are not focused on testing the hypotheses that are the aims of your manuscript.
 - d. **Procedure:** Please describe the procedure in sufficient detail so that it could be comprehended and replicated by another investigator. Identify by name the IRB or ethics committee (edited out for blind review in the submitted manuscript) that approved the research, and the manner in which consent was obtained.
 - e. **Measures:** In addition to providing citations, psychometric, and validation data for each measure administered, please provide coefficient alpha from your data for each measure for which this is appropriate.
 - f. **Data Analysis:** Include a separate subsection with this header in the Method section in which you describe the analyses performed, the software program(s) used, and make an explicit statement about missing data in your data set. If there are no missing data, so state; otherwise describe the extent of missing data and how they were handled in the data analyses.

- g. **Results** (and throughout): Present percentages to 1 decimal place, means and *SDs* to 2 decimal places, and exact *p* values to 3 decimal places except for any $< .001$. Include leading zeros (e.g., 0.92) when reporting any statistic that can be greater than 1.00 (or less than -1.00). For example, there is no leading zero used when reporting correlations, coefficient alphas, standardized betas, *p* values, or fit indices (e.g., $r = .47$, not 0.47). Report effect sizes for analyses conducted wherever possible and appropriate.
- h. **References**: Format the references using APA 6th edition style: (a) begin the reference list on a new page following the text, (b) double-space, (c) use hanging indent format, (d) italicize the journal name or book title, and (e) list alphabetically by last name of first author. Do not include journal issue numbers unless each volume begins with page 1. If a reference has a Digital Object Identifier (doi), it must be included as the last element of the reference.

(1) Journal Article:

Kraemer, H. C. (2009). Events per person-time (incidence rate): A misleading statistic? *Statistics in Medicine*, 28, 1028–1039. doi: 10.1002/sim.3525

(2) Book:

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

(3) Book Chapter:

Meehl, P. E. (2006). The power of quantitative thinking. In N. G. Waller, L. J. Yonce, W. M. Grove, D. Faust, & M. F. Lenzenweger (Eds.), *Essays on the practice of scientific psychology* (pp. 433–444). Mahwah, NJ: Erlbaum.

- i. **Footnotes**: Footnotes should be avoided. When their use is absolutely necessary, footnotes should be formatted in APA style and placed on a separate page after the reference list and before any tables.
- j. **Tables**: Tables should be formatted in APA 6th edition style and should be placed after the references in the body of the manuscript. Please use Word's Table function to construct tables, not tabs and spacing. Tables should be numbered (with Arabic numerals) and referred to by number in the text. Each table should begin on a separate page. Please make tables double-spaced, decimal align all numeric columns, and use sentence case for labels.

Each datum should appear in its own cell (e.g., do not include *SDs* in parentheses following *Ms* but instead create a separate column for *SDs*). When reporting a table of intercorrelations, fill the rows first and then the columns such that any empty cells are in the lower left-hand quadrant of the table; use dashes in any redundant cells indicating the correlation of a variable with itself. Report exact *p* values to three decimal places (e.g., $p = .043$) wherever possible; however, if doing so would make the table unruly (e.g., in a table

of intercorrelations), it is permissible to use asterisks to indicate p values at the traditional cut-off points (e.g., * $p < .05$. ** $p < .01$. $p < .001$).

Color in tables: Color can be included in the online version of a manuscript at no charge; however use of color in the print version of the journal will incur additional charges (currently \$600 per figure or table). If you wish to include color in only the online version, please ensure that each table will be legible in greyscale when it is published in the print version; for example, lines of different colors may be discriminable from one another when viewed in color but may not appear to be different from one another in greyscale.

- k. **Figures:** All figures (graphs, photographs, drawings, and charts) should be numbered (with Arabic numerals) and referred to by number in the text. Each figure should begin on a separate page. Place figures captions at the bottom of the figure itself, not on a separate page. Include a separate legend to explain symbols if needed. Please use Arial font

throughout except for the caption, which should remain as Times New Roman. Use sentence case for titles and labels. Figures should be in Word, TIF, or EPS format.

Color in figures: Color can be included in the online version of a manuscript at no charge; however use of color in the print version of the journal will incur additional charges (currently \$600 per figure or table). If you wish to include color in only the online version, please ensure that each figure will be legible in greyscale when it is published in the print version; for example, lines of different colors may be discriminable from one another when viewed in color but may not appear to be different from one another in greyscale.

7. **Uploading Files:** After the separate Title Page has been uploaded as a Word file (.doc or .docx), the remaining text (abstract, main body of the manuscript, references, and tables) should be uploaded as a separate **single** Word file (.doc or .docx) designated as "Main Document." Figures may be either included in the main document or uploaded as separate files if in a non-Word format.
8. **Supplementary Materials.** Authors may wish to place some material in the separate designation of "Supplementary file not for review," which will be made available online for optional access by interested readers. This material will not be seen by reviewers and will not be taken into consideration in their evaluation of the scientific merits of the work, and will not be included in the published article. Material appropriate for such a designation includes information that is not essential to the reader's comprehension of the study design or findings, but which might be of interest to some scholars; examples might include descriptions of a series of non-significant posthoc analyses that were not central to the main hypotheses of the study, detailed information about the content of coding system categories, and CONSORT flow diagrams for randomized controlled trials (see below). Note well that the manuscript must stand on its own without this material; consequently, critical information reviewers and readers need to evaluate or replicate the study, such as the provenance and psychometric properties of the measures administered, is not appropriate for placement into Supplementary Materials.
9. **Statement of Ethical Standards:** In the conduct of their research, author(s) are required to adhere to the "Ethical Principles of Psychologists and Code of Conduct" of the American Psychological

Association (visit <http://www.apa.org/science/leadership/research/ethical-conduct-humans.aspx> for human research or <http://www.apa.org/science/leadership/care/guidelines.aspx> for animal research) or equivalent guidelines in the study's country of origin. If the author(s) were unable to comply when conducting the research being presented, an explanation is required.

All work submitted to the *Journal of Traumatic Stress* must conform to applicable governmental regulations and discipline-appropriate ethical standards. Responsibility for meeting these requirements rests with all authors. Human and animal research studies typically require prior approval by an institutional research or ethics committee that has been established to protect the welfare of human or animal participants.

Data collection for the purposes of providing clinical services or conducting an internal program evaluation generally does not require approval by an institutional research committee. However, analysis and presentation of such data outside the program setting may qualify as research (which is defined as an effort to produce generalizable knowledge) and thus may require approval by an institutional committee. Those who submit manuscripts to the *Journal of Traumatic Stress* based on data from these sources are encouraged to consult with a representative of the applicable institutional committee to determine whether approval is needed. Presentations that report on a particular person (e.g., a clinical case) also usually require written permission from that person to allow public disclosure for educational purposes, and involve alteration or withholding of information that might directly or indirectly reveal identity and breach confidentiality.

To document how these guidelines have been followed, authors are asked to identify in the online submission process the name of the authorized institution, committee, body, entity, or agency that reviewed and approved the research or that deemed it to be exempt from ethical or Internal Review Board review. Although blinded at the time of submission, the name of the IRB or ethics committee that approved the research, and the manner in which consent was obtained, also should appear in the Procedure subsection of the Method in the body of the report.

10. **Randomized Clinical Trials:** Reports of randomized clinical trials should include a flow diagram and a completed CONSORT checklist (available at <http://www.consort-statement.org>) indicating how the manuscript follows CONSORT Guidelines for the reporting of randomized clinical trials. The flow diagram should be included as a figure in the manuscript whereas the checklist should be designated as a "Supplementary file not for review" during the online submission process. Please visit <http://consort-statement.org> for information about the consort standards and to download necessary forms.
11. **Systematic Reviews:** Reports of systematic reviews follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (<http://www.prismastatement.org/documents/PRISMA%202009%20checklist.pdf>) and should be accompanied by a flow diagram (<http://www.prisma-statement.org/PRISMAStatement/FlowDiagram.aspx>) mapping out the number of records identified, included, and excluded, and the reasons for exclusions.
12. **Writing for an International Readership:** As an international journal, the *Journal of Traumatic Stress* avoids the use of operational code names or nicknames to describe military actions, wars, or

conflicts, given that these may not be equally familiar or meaningful to readers from other nations. Helpful guides for clear and neutral language for reporting on military-based research can be found at the following webpages: the ISTSS newsletter *StressPoints*

([http://www.istss.org/educationresearch/traumatic-stresspoints/2015-march-\(1\)/media-matters-what%E2%80%99s-in-a-name-using-military-code.aspx](http://www.istss.org/educationresearch/traumatic-stresspoints/2015-march-(1)/media-matters-what%E2%80%99s-in-a-name-using-military-code.aspx)), the *International Press Institute*

(<http://ethicaljournalismnetwork.org/assets/docs/197/150/4d96ac5-55a3396.pdf>) and the

Associated Press Stylebook and Briefing on Media Law

(<http://www.apstylebook.com/?do=help&q=48/>). In addition, authors are encouraged to give

consideration to whether particular research findings might be culturally-specific rather than universally established; e.g., prevalence rates derived from samples consisting of all-US participants should be identified as such.

13. **Originality and Uniqueness of Submissions.** Submission is a representation that neither the manuscript nor substantive content within in it has been published previously nor is currently under consideration for publication elsewhere. A statement transferring copyright from the authors (or their employers, if they hold the copyright) to the International Society for Traumatic Stress Studies will be required after the manuscript has been accepted for publication. Authors will be prompted to complete the appropriate Copyright Transfer Agreement through their Author Services account. Such a written transfer of copyright is necessary under U.S. Copyright Law in order for the publisher

to carry through the dissemination of research results and reviews as widely and effectively as possible.

14. **Pre-Submission English-Language Editing:** Authors for whom English is a second language may choose to have their manuscript professionally edited before submission to improve the English. Japanese authors can find a list of local English improvement services at

<http://www.wiley.co.jp/journals/editcontribute.html>. All services are paid for and arranged by the author, and use of one of these services does not guarantee acceptance or preference for publication.

15. **Page Charges:** The journal makes no page charges. The only exception to this, as noted above, is if authors wish tables or figures to be printed in color.

16. **Author Services:** Online production tracking is available for your article through Wiley-Blackwell's Author Services. Author Services enables authors to track their article—once it has been accepted—through the production process to publication online and in print. Authors can check the status of their articles online and choose to receive automated emails at key stages of production. Authors will receive an email with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete email address is provided when submitting the manuscript. Visit <http://authorservices.wiley.com/> for more details on online production tracking and for a wealth of resources including FAQs and tips on article preparation, submission, and more. Corresponding authors: In lieu of a complimentary copy free access to the final PDF offprint of your article will be available via Author Services only. Please therefore sign up for Author Services if you would like to access your article PDF offprint and enjoy the many other

benefits the service offers. Should you wish to purchase reprints of your article, please click on the link and follow the instructions

provided: <https://caesar.sheridan.com/reprints/redir.php?pub=10089&acro=JTS>

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18. **NIH Public Access Mandate**: For those interested in the Wiley-Blackwell policy on the NIH Public Access Mandate, please visit our policy statement at www.wiley.com/go/nihmandate

Section Two: Research Paper

Ambulance Clinicians' Experiences of Psychological Trauma: An Interpretive Phenomenological
Analysis.

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Target journal: Journal of Traumatic Stress

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Abstract

This study explored ambulance clinicians' experience of psychological trauma as a consequence of routine practice associated with their role. Semi-structured interviews were conducted with 5 participants and the data were analysed using Interpretative Phenomenological Analysis. Results are reported and discussed within four themes: (1) focused and detached in order to do the job; (2) "we are only human": The risks of emotionally connecting; (3) regaining control and processing the event; (4) The psychological impact and implications for support. The results are then considered in terms of clinical implications. This study demonstrates the difficulties ambulance clinicians can experience as a result of routine practice and the need for support.

Keywords: ambulance clinicians, trauma, PTSD, qualitative, support

Ambulance Clinicians' Experiences of Psychological Trauma: An interpretive phenomenological analysis.

Emergency personnel (firefighters, police officers and ambulance clinicians) are exposed to events involving human pain and suffering daily, this may make them vulnerable to developing post-traumatic stress symptomatology (Alexander & Klein, 2001; Beaton & Murphy, 1995). Research has shown that everyday occupational duties can be just as stressful as acute disaster work (Marmar, Weiss, Metzler, Ronfeldt & Foreman, 1996), demonstrating the need for research on psychological distress arising from operational duties in the emergency services (Bhatia, 2015).

Ambulance clinicians respond to more emergency calls than the fire service and police combined (Shakespeare-Finch, Smith, Gow, Embleton, & Baird, 2003). The majority of jobs ambulance clinicians respond to are non-emergency work and can include primary care and social issues (Department of Health, 2005; Sterud, Hem, Lau & Ekeberg, 2011). These jobs may be experienced as more emotionally stressful than emergency events (Sterud et al., 2011). In a wider National Health Service (NHS) context, increasing pressures are causing longer waiting times to admit patients to hospital, resulting in delays for ambulances and increasing demand on patient transport (Blue, 2017; Thornes, Fisher, Rayment-Bishop & Smith, 2014). Response time targets can have a profound negative impact on ambulance clinicians' health, safety and wellbeing (Price, 2006). A review found that compared to other emergency personnel ambulance clinician stress and burnout levels are among the highest (Paton & Violanti, 1996), this has been further evidenced in more recent research (Coxon et al., 2016; Halpern, Maunder, Schwartz & Gurevich, 2011). Ambulance staff have the highest average sickness rate in the NHS, with an average of 5.36% (NHS sickness absence rates, 2017), which may reflect the above difficulties.

Post-Traumatic Stress Disorder (PTSD) is the long-term outcome that has been most studied in ambulance clinicians (Bennett, Williams, Page, Hood & Woollard, 2004). PTSD is a common reaction to traumatic events and the symptoms can include repeated and unwanted reexperiencing of the event, hyperarousal, emotional numbing and avoidance of stimuli which could serve as reminders of the event. According to the *Diagnostic Statistical Manual-V* (DSM-V; American Psychiatric Association; APA, 2013), PTSD criteria of a traumatic event include involvement in, witnessing, or learning about (the latter in a close associate or family member) actual or threatened death or repeated or extreme indirect exposure to aversive details of the events usually during professional duties (e.g. emergency personnel), accompanied with a response of intense fear, horror or helplessness.

Ambulance clinicians witness actual or threatened death and encounter situations that can trigger the cognitive and emotional responses associated with a traumatic event (i.e. helplessness, horror and intense fear, APA, 2013), with some regularity (Bennett et al., 2005). A meta-analysis indicated ambulance clinicians may be at particularly high risk compared to other emergency personnel, with the highest reported PTSD prevalence at 14.6% (Berger et al., 2012).

Many individuals experience some of these symptoms in the immediate aftermath following a traumatic event but recover in the subsequent weeks or months; however, in a significant number the symptoms persist. It has been suggested the individual differences in the personal meaning (appraisal of the trauma) and/or its sequelae (e.g. reactions of other people, initial PTSD symptoms, physical consequences of the trauma) determine whether PTSD develops (Ehlers & Clark, 2000; Ehlers & Wild, 2015).

Research has found the events that are the most distressing for ambulance clinicians involve the death or injury of someone whom the ambulance clinician contextualised in a relationship with others, for example: a child that was abused or an individual who died alone without the support of others. In the process of contextualising, it has been suggested that the ambulance clinician moves from being cognitively aware of the distress of the victims, whilst still being able to maintain distance, to having an emotional connection to someone's suffering (Regehr, Goldberg & Hughes, 2002). This has been supported in work with other emergency personnel (Carlier, Lamberts & Gersons, 2000; Fullerton, McCarroll, Ursano & Wright, 1992). Earlier research has indicated identification with the victim can be a strong predictor for post-traumatic stress reactions among emergency personnel (Ursano, Fullerton, Vance & Kao, 1999), especially when children are involved (Dyregrov & Mitchell, 1992). This finding has been extended, showing that critical incidents involving children are the most distressing (e.g. Alexander & Klein, 2001; Jonsson & Segesten, 2003; Van der Ploeg & Kleber, 2003) and can frequently lead to intrusive memories in ambulance clinicians (Clohessy & Ehlers, 1999).

Ambulance clinicians rely on different coping strategies to try and distance themselves from the emotional intensity of their work. Although personal differences play a part, these strategies can include dark humour (Alexander & Klein, 2001; Halpern, Gurevich, Schartz & Brazeau, 2009), preparing themselves on the way to an event (Avraham & Goldblatt & Yafe, 2014; Jonsson & Segesten, 2004) and detachment (Figely, 1998). Avoidance may be necessary to suppress fear and anxiety, to ensure focus on the job is maintained (Gibbs, Drummond, & Lachenmeyer, 1993; Janik, 1992). However, suppression of emotion over a prolonged period can be maladaptive (e.g. Joseph et al., 1997; Pennebaker, Barger & Tiebout, 1989), as although adaptive at the time of the event, may impede recovery by interfering with emotional processing

(e.g. Bryant & Harvey, 1995; Duffy, Bolton, Gillespie, Ehlers & Clark, 2013). These findings were also found in the meta-ethnography presented in an earlier section of this thesis.

It has been reported that support from peers and family members is important to reduce feelings of distress in ambulance clinicians (Avraham et al., 2014). Making the experience understandable and meaningful by talking to others seems to be an important mediator and contributes to how ambulance clinicians cope with the traumatic event (Jonsson & Segesten, 2003). Formal organisational support has also been described as important (Regehr et al., 2002). Trauma Risk Management (TRiM) is a proactive post traumatic peer group delivered management strategy that aims to keep employees of hierarchical organisations functioning after traumatic events, to provide support and education to those needing it and to identify those with difficulties who require more input. It was developed within the Royal Marines and has now been used within some army units, and ambulance services (Greenberg, Langston & Jones, 2008). However, these formal support systems are often only triggered by large-scale incidents (Regehr et al. 2002). It is not always possible to anticipate when traumatic events experienced as a routine part of the role will impact ambulance clinicians, meaning that pathways to occupational health support services are often not triggered.

There is a societal perception that ambulance clinicians are capable of functioning efficiently in highly stressful situations without being emotionally affected by the difficult situations involved in their work (Jonsson & Segesten, 2004). Miller (1995) coined the expression “tough guys” to characterise the professional identity of emergency responders. These characteristics include adaptation ability, defensive toughness of attitudes and determination, which are essential for effective functioning in emergency situations. Studies of emergency personnel have shown a tendency to deny their emotions, due in part to a belief that to effectively

do their job they need to be “tough” (Palmer, 1983; Stephens, Long & Miller, 1997). From the existing literature it is unclear whether this is internalised from society or engineered through training and experience. Difficulties in admitting to distress might pose significant difficulties in accessing support and they may fear the stigma that might result from revealing it to others (Halpern et al., 2009). As above, avoidance of emotions can be detrimental as it interferes with the emotional processing of the traumatic event (Ehlers & Clark, 2000).

Ambulance clinicians are routinely exposed to potentially traumatic experiences which can be detrimental to their wellbeing. Therefore, it is paramount to understand ambulance clinicians' individual and subjective experiences of psychological trauma to attempt to inform future training and support, with the aim of improving the wellbeing of the workforce. Nevertheless, ambulance clinicians' experiences of psychological trauma resulting from their role has been scarcely studied to date. Some qualitative studies have been carried out to investigate the experiences of ambulance clinicians in responding to traumatic events, as shown in the findings from the meta-ethnography carried out in the first section of this thesis. Jonsson and Segesten (2003) analysed written stories from ambulance clinicians who were describing a traumatic event they had experienced as part of their role. Their main findings were that the ambulance clinicians had a strong identification with patients and found it impossible to prepare for events that are unforeseen and meaningless. Similarly, Gallagher and McGilloway (2008) carried out interviews with ambulance clinicians to examine the nature and impact of traumatic events on health and well-being and examining attitudes and barriers to using support services. This study found that ambulance clinicians experienced sleep difficulties and irrationality as well as confidentiality and machismo having an impact on seeking support.

This research aims to add to and extend these findings by understanding the personal meaning of a traumatic event which can result in ambulance clinicians experiencing psychological trauma as a consequence of their role. Additionally, it aims to explore ambulance clinicians' experiences of psychological trauma and how they cope with this exposure to traumatic events. Knowledge about this may help to understand what may contribute to developing psychological trauma and attempt to inform future training and support. Therefore, the main research question is: What are ambulance clinicians' experiences of psychological trauma? This question will be addressed through three secondary questions: How do ambulance clinicians make sense of the link between exposure to traumatic experiences and their own psychological difficulties? What is the impact of experiencing psychological trauma on the work and personal lives of ambulance clinicians? What are ambulance clinicians' coping mechanisms to manage psychological difficulties as part of their role?

Method

Design

A qualitative Interpretative Phenomenological Analysis (IPA) design was employed utilising semi-structured interviews. IPA was deemed the most appropriate approach due to the research question focusing on the experiences of participants and meaning making (Smith, Flowers & Larkin, 2009). It favours smaller sample sizes as it has an idiographic focus which emphasises the importance of understanding each participant's meaning-making, and the "convergence and divergence between participants" (Smith, et al., 2009, p. 202). Additionally, IPA is also suited to data involving "complexity, process or novelty" (Smith & Osborn, 2008, p.55). The way in which ambulance clinicians experience psychological trauma because of their role was considered a novel area for exploration with the potential for divergent experiences.

Participants

Participants needed to be currently serving in the ambulance service as paramedics or Emergency Medical Technicians (EMT). They were required to have experienced self-reported psychological trauma-related symptoms related to their role, such as: reliving the traumatic event through intrusive memories, flashbacks and nightmares; difficulty sleeping; avoiding reminders of the event; and feelings of isolation, irritability and guilt due to the psychological trauma they have experienced. A self-report approach to inclusion was adopted due to the study's focus on how participants made meaning of their own experiences of psychological trauma.

The aim was to recruit 8 to 12 participants, as the study was looking to recruit a mixture of different levels of ambulance clinicians. However, despite several attempts to recruit, only 5 participants took part in the study. In total ten people contacted the researcher to express their interest in the research. One person initially expressed an interest in the study but was then unable to participate, three people agreed to take part but did not respond to attempts to arrange an interview and one person cancelled several planned appointments to meet, and then did not respond. In IPA there has been a trend towards smaller N research to give a more thorough analysis of each interview (Smith & Osborn, 2008), therefore this sample size was deemed appropriate. IPA studies require a sample of participants that are homogenous as possible. Although participants varied in their gender, length of service and roles within the ambulance service, due to the similarity of the participants' experiences, this small sample of participants was deemed to be a sufficiently homogenous group. Table 1 shows participants' demographic information.

Insert Table 1

Procedure

Ethical approval

Research governance approvals for this study were obtained from North West Ambulance Service and the Research Ethics Committee of the researcher's host academic institution.

Data collection

Participants were recruited from the North West Ambulance service through an advanced paramedic based at the service. An advanced paramedic circulated a poster detailing the study and inclusion criteria on staff bulletins and the poster was also circulated via Blue Light Champions. Staff were invited to contact the main researcher if they were interested in participating in this study. If staff who responded were happy to proceed a mutually convenient time was set up to carry out the interview.

Interviews were offered at an ambulance base, in a neutral venue, at participants' homes or via telephone or video conferencing software to ensure participants were comfortable with where the interviews are taking place. All interviews were conducted by the researcher. Participants were interviewed in their own time, at home (n=1), at a neutral venue (n=1) and at an ambulance station (n=3). A semi-structured interview schedule was devised following discussion with a Blue Light Champion who was part of the Blue Light Programme developed by Mind (Mind, 2015). They are employees or volunteers in the emergency services, who act in the workplace to raise awareness of mental health problems and challenge mental health stigma (Mind, 2015). The Blue Light Champion advised that following the question: "Is there a particular traumatic event that you were thinking of when agreeing to participate in this study? Can you briefly describe what this is?", an additional question was added to the interview schedule "what were the experiences that led you to participating in this study?" as many

ambulance clinicians will have a variety or cumulative effect of experiences they will draw on. This was used flexibly and consisted of main topic areas, initial questions and possible prompts to elicit more detailed responses. Interviews lasted between one and one and a half hours, were audio recorded and transcribed verbatim. They covered the following topics: their experiences of trauma; how they coped; and the impact on them personally and professionally.

Analysis

Analysis began by reading each transcript several times. Exploratory comments were then made on the transcripts about how it was felt participants were making sense of their experiences of psychological trauma. In the next stage, more interpretative emergent themes were noted on the transcript itself, based on the exploratory comments and the transcript itself. Major themes were then developed by grouping emergent themes where connections were apparent. A summary was written for each major theme, thus providing an overall narrative of experience for each participant. Once this process was completed for each transcript, each major theme was viewed in parallel within and across participants' accounts and connected to those that carried similarities in content or meaning. These interrelated themes were then worked into a set of super-ordinate themes representing the entire sample. Super-ordinate themes were labelled in a way that reflected both the participants' accounts and the researcher's interpretation. These super-ordinate themes were then compared to individual participants' narrative summaries to ensure they reflected participants' experiences (See Appendix). The supervisory process involved my research supervisor reading two of the individual analyses carried out on the transcripts. This meant that the arrangement of some of the themes underwent changes. For example, in the original analysis of the first transcript the theme 'focused and detached to do the job' comprised of two separate themes 'coping before and during the job' and 'coping following the job'.

However, after discussion regarding the underlying psychological process represented in those themes, aspects of these two themes were merged to form the theme 'focused and detached following the job' and another theme 'regaining control and processing the event' was developed. To evidence the process of analysis, extracts from a transcript with annotation has been provided in the appendix for the reader.

Quality

IPA focuses on participants' individual perceptions of events whilst recognising the researcher has an active role in the analytical process. A reflective diary was used to gain a better understanding of my views and potential influences as the research progressed, to highlight potential biases and assumptions and to reflect on each interview. My personal interest in this topic came from my role as a psychology assistant working in a traumatic stress service. I noticed that often when individuals experience traumatic events as an adult, it can connect to previous traumatic events, this may have influenced me when conducting the research. Keeping a research diary to record my perceptions about emerging themes and their connections, whilst conducting, transcribing and analysing the interviews, enhanced my awareness of my own preconceptions and their influence on the analysis. This enabled me to then put these ideas and perspectives to one side to privilege the viewpoint of the participants.

Research supervision was provided to check for adherence and competence regarding the principles of the research method employed. To ensure themes were reflective of the data, data from one participant, along with the annotations and analysis, was reviewed by my academic supervisor.

Results

Participants' data are represented within four overarching themes.

1. Focused and detached in order to do the job
2. "We are only human": The risks of emotionally connecting
3. Regaining control and processing the event
4. The psychological impact and implications for support

Where quotes are used pseudonyms are used to protect anonymity.

Focused and detached in order to do the job

Participants described the importance of staying in control and remaining focused on the way to and during the event itself to enhance their ability to function efficiently during the job.

The strategies used were typically centred around detachment and distraction to protect

themselves from difficult events that might have affected them emotionally. Some of these

strategies were practical such as Katie preparing herself on the way to the job and expecting the

worst, "the minute it comes up on the screen that you are going to cardiac arrest you have got to

think, personally you think the negative a person has died, you aint going to get them back"

(Katie). All participants, focused on technical activity and protocol, and described following a

strategic approach, "I always run on autopilot, I know what needs to happen, it is not about me it

is about that patient" (Michael). This helped to focus all their attention on the job and "putting

away" (Mark) what else was happening so they could keep going and help the patient.

Participants also described that when they perceived their emotions could become

overwhelming, they found the strength to carry on by using their empathy for the family to

motivate them and regain focus, "put it to the front of my head, it is all down to me, and if I can't

do my job they are going to die, talk to myself" (Steve).

Participants also described an emotional detachment, which involved neutralising their emotions. This was a strategy that was generally used following the job, so they did not become affected by what they had encountered, "I do feel sorry for the family but it is not my family and I cannot allow it to affect me and I just blank it out and I carry on with my life" (Katie). Greg also dehumanised the patient to help further detach himself, particularly if the person had died, "it is just a body, it is not a person anymore". Katie believed you had to be hardened to the job to survive and decrease the chances of the job having a negative impact on your mental wellbeing. She appeared to have a very practical and objective way of coping and dealing with her emotions. Whereas Mark appeared to have a more empathic stance towards himself, "you need to be able to allow yourself to walk away from it and shut the door" (Mark). For Steve, becoming detached came from a different perspective than the other participants, as he described often feeling a severe lack of compassion towards patients. He described becoming aware of this and incorporating strategies,

You can find yourself completely emotionless with an empty bucket and you can only care about you but the danger then is it can have a knock on effect with patients... who really need a lot of help but you find yourself emotionless but then can become dangerous... you have to give yourself a good talking to (Steve).

It also appeared important for the participants to have a clear rationale for their decisions and can justify their actions when handing over responsibility,

I know that I justify all my actions, whatever the patient presents with I will give whatever I can, it will either work or it won't, at least I can go to the hospital saying this is what is wrong with the patients because of these signs and symptoms (Katie).

Doing something wrong was a worry for most of the participants and by implementing a strategic response, accepting that not everyone could be saved and not being affected by emotions, they knew their professional competence would not be threatened, “you can’t fix everyone and it is not your inability, it is not your qualifications or skills it is the fact that their bodies may not be reacting to the medicine” (Katie).

“We are only human”: The risks of emotionally connecting

Participants described responding to jobs that hindered their ability to emotionally detach themselves from patients and their family, and the difficult feelings that could result from this. This connection could be formed when the participants struggled to find meaning when a patient ended up being hurt or dead; particularly in circumstances which felt unfair or odd,

it is not the mangled people, it is the 14-year-old kid 200 yards down the road from a car where his dad is dead and he hasn’t got a mark on him and he is sat there, you say did you see this, he says no I was in the car (Michael)

Participants described contextualising the patient in their life, which meant they moved from seeing the patient as a job to being a human,

when it is a child, you look beyond them being a child, they have so much in front of them, growing up, what they like what they don’t like, family holidays, it is quite sad they have so much ahead of them and potentially they have missed out (Greg)

All participants found cases involving children particularly difficult, especially when they had children of their own,

the job got far more difficult, since becoming a family person...every time it had anything to do with kids, it always hits home... it is that association of seeing a child of a similar age to yours, makes it even worse... when I go to a child I think it could be my

child... and you feel more about what their parents feel and it goes along with your children's ages... it could be your child, it has made me super anxious (Mark).

Commonly when responding to children, family members were present and distressed, often requiring extending care to them by offering emotional support. This made it difficult to remain detached, as they could not use the strategy of focusing all their attention on the patient, resulting in it becoming easier to take in what was happening around them and their empathy for the family's distress becoming overwhelming. Additionally, relaying difficult information to the family meant that they had to gauge the family's emotional state before deciding what information to give and how to deliver it, whilst being truthful about the reality of the situation,

you just focus on keeping the child alive, it is the mum that is upsetting, watching her reaction, trying to keep her informed of what is going on, had to radio talk to hospital and one eye on her little one... that is what hits home when you are on the radio describing the child's status and then you see the mum hearing everything you are saying (Steve).

Katie described attending jobs, for which she was unprepared. As her ways of coping included preparing for the job and having a strategic response, as described in the 'focused and detached in order to do the job' theme this was distressing, "we weren't going to that job we had a patient, there was a person in the road, we weren't prepared" (Katie).

Suicides were difficult as there was nothing they could do to help and it encouraged reflection on why that person felt suicide was the only option. Mark identified with suicide as he had attempted to take his own life, meaning he further empathised and connected on a personal level which could have heightened feelings of personal vulnerability,

Hangings really get you because the anguish before, a lot of people say they are cowards it takes some guts to do that and it must have been bad to yeah, those can be very confronting, make you confront your own mortality and vulnerabilities (Mark).

Most of the participants spoke about their personal life being affected. This commonly occurred when a patient and their circumstances, bore similarity to their own life. Katie described thinking about becoming pregnant at a time when she attended a job where a baby died, which resulted in her then worrying when her own baby reached the same age. Mark stated he often “gave too much of himself” to this job, meaning he could become emotionally overinvolved with a patient, at the expense of his wellbeing,

I will engage more than is comfortable for me in talking to them, even telling them that I have had serious experiences simply because I wouldn't want to think that I could have made a difference but not taken this opportunity (Mark).

He ascribed his whole identity to being a paramedic, which had an impact on his personal life and mental health.

Steve found it difficult to emotionally connect to patients particularly when attending to ‘time-wasters’ (people who did not necessarily need an ambulance) which led to him feeling depleted of emotions,

if you were to put your heart and soul into every job you would be exhausted... you have a bucket full of emotions... is not the traumatic jobs, it is the time-wasters, every time you meet a time-waster or an idiot it is another hole in that bucket of emotions, just bleeds out (Steve).

Regaining control and processing the event

Participants described ways of trying to regain control to help cope with difficult emotions. This commonly occurred when they had emotionally connected to a patient or they were concerned about their performance on a job. For all participants, a common way of regaining control involved informal support from colleagues, which could relieve worries about whether they performed correctly on a job. Additionally, talking about the job helped participants process what had happened in a less threatening way, as they could frame it as improving their practice,

you have hot debriefs after a job, you talk about what went well, what didn't go well, how you worked on a team, on reflection you take that away with you... the things that didn't go too well you don't allow the same things to happen again, you are always improving (Greg).

Informal support helped to align what had happened on the job and their emotions, without going into detail about how the job affected them emotionally, which was not always required,

conversation would have a mixture of facts and feelings, the facts when you line them all up may mitigate feelings, sometimes in the job the feeling may have impacted on the job in that you are unable to deal, it happens you freeze, but to come back to it I think there is a huge benefit (Mark).

Colleagues were also able to understand and empathise due to having similar experiences. Mark described being able to speak in more depth about his emotional responses with colleagues he had a close relationship with. However, for Katie and Steve, speaking informally about their emotional responses and how a job affected them could feel embarrassing

and something they would avoid, "I would not feel comfortable talking to taking about stuff, not in the slightest...I would feel ridiculous" (Steve).

Participants described using humour, to discuss difficult jobs in a less exposing way, "I speak to my best mate, we try to lighten it, she has really bad jobs too, it is like our coping strategy to lighten it and try and see who has been to the worst job" (Katie).

Talking to colleagues was particularly helpful, to offload, so they did not take the job home with them. It was important not to burden their family with the details of the job they had been to, as they may not understand what the job entailed, "biggest value is coming into the crew room and speaking with other crews, often at home it is not necessarily the best place, your partner or whatever can't necessarily see what you see" (Mark). For Michael and Greg, they did find it helpful to talk to their family. This was particularly so for Michael, whose wife worked in a similar domain and therefore understood the nature of the job,

I will say to my good lady... I have had a bad day, I am still thinking about it, have a five minute chat and hopefully put it to bed... my wife worked in PTS [Patient Transport Service] so she knows the service... that helps (Michael).

Sometimes, following a job, participants felt they needed to follow up on a patient. This could involve going to visit them, attending a funeral, or finding out what happened to a patient following their involvement. This could help with closure, finding meaning in what happened to the person and ensure they had done everything they could to help them. Steve emotionally conveyed that he used his faith when trying to help a patient, "for me it all comes down to a simple prayer. That is all you can do sometimes" (Steve), this helped to ease feelings of helplessness.

The psychological impact and implications for support

This theme encompasses how participants were affected by psychological trauma, describing the difficulties that arise with the jobs that were hard to leave behind, resulting in being reminded of them, in the form of nightmares, memories or rumination. It was difficult for participants to utilise support, particularly formal support, and they did not feel the support always adequately met their needs.

Participants could be reminded of previous difficult jobs on a challenging shift, when difficult jobs followed one another, “you may have a run of bad jobs and it may bounce some of the others back or you will see something that was in one of those real bad jobs again” (Michael). Michael and Greg felt it was important to have a break between bad jobs to counteract this. For Steve, a cumulative effect was one that built up over his career, reducing his capacity to be empathic, and his positivity towards his role,

there is no light at the end of the tunnel, there is another shift another load of crap, another load of emotional crap you are going to have to deal with or you have to deal with it when you close the door and close your eyes to try and go to sleep at night. There is no looking forward to in this job. None. (Steve).

This cumulative effect of jobs was seen as something that needed to be accepted as part of the role,

I don't know if the accumulative effect has any value in terms of where you store these things, it almost becomes benign in order to keep going, you have to put it somewhere, even though ordinarily you wouldn't be expected to put something with such impact to put it away somewhere (Mark).

Steve thought that to reduce the cumulative effect, they needed to have a break from the front-line, “they need to start thinking of rotating staff so exposing them on the front line, give them 18 months to patch up their bucket with filler and fill it with emotion again” (Steve).

As Steve was struggling with his capacity to be empathic and care about his patients, he hit a breaking point and felt he had to take precautions, “I got to a point that I have just left the job because I believe my practice is not dangerous but not as good as it should be, I need to go away and repair myself” (Steve). This cumulative effect appeared to be more prominent in Steve and Katie who felt they could not utilise support informally or formally, which could mean that as they do not have a place to process the jobs, the impact of the difficult jobs builds up,

I walk away and think I am still going through my bad time and nobody is helping me.

But then I think nobody is helping me because I haven't told them and I won't because I don't want to be a burden to them (Katie).

As described in the theme “we are only human”: The risks of emotionally connecting', identifying with a patient could cause distress. For some participants, this identification with patients was so strong it resulted in intrusive thoughts, memories and rumination. Katie described a job that bore similarity to her own circumstances and heightened her anxiety regarding her family's mortality,

I just became a mess after that... my husband wanted a baby this was just before I became pregnant and I am like why does he want a baby for it to die, so I went off work...I was constantly crying for a couple of weeks, then obviously got pregnant, had my baby and on day seven I would not go to bed, I stayed up all night watching this baby as I was convinced that my baby was going to die on day seven (Katie).

Mark described identification with a child who had been murdered and considered in detail the experiences of that child. He was not able to comprehend why this would happen to a child and felt overwhelming feelings of guilt, even though he rationally knew there was nothing he could have done,

I don't care what mental health state he was in, to purposefully go back upstairs to finish him off. He would have heard him come upstairs, he would have known what was coming... so it haunted me... the visual thought and thinking I could have been there to protect him and that ties in with my boys I would die before my boys died, I have just too vivid imagination, seeing that man come towards him with that knife and plunging it into him. Just saying it is difficult. I saw the stab wounds and this boy not comprehending what happened to him.

To add to this, Mark was given the responsibility to save the child's father, who had killed him and then attempted to kill himself, "I had a job to pull myself together and had to continue to treat the man and we saved his life that was really weird, it felt so wrong" (Mark). He used his detachment strategies, so he could do his job, but this affected him later and led to rumination and guilt.

It was difficult to move on from jobs where participants struggled to find meaning. When a job resulted in negative conclusions being made about themselves or others or the fairness of the world this could be very distressing. This contributed to a view of humanity as bleak and a changed world view that is common with difficulties associated with post-traumatic stress, "it just had never occurred to me that something like that could happen, horrible treatment of adults to one another, horrible treatment from adults to adults, or treatment to children to children" (Mark).

Participants felt stigma had improved and mental health difficulties were becoming accepted; however, stigma was still felt to exist, “people are coming to terms with the fact that you can talk about it. I wouldn’t say it is common place but it is a lot better than it was” (Michael). Some participants felt embarrassed and found it difficult to admit, even within themselves, if they were struggling. This came from a belief that they should be stronger. Steve described a male stereotype and due to his upbringing, he did not like talking about his emotions and would either cry in private or block out his emotion. For this reason, he did not like speaking to someone he knew and although appreciated the TRiM support that was offered, did not feel he could utilise it; Katie also felt this.

When participants were affected by a smaller scale job, they felt there was limited support available, “I guess you know maybe I haven’t dealt with it quite yet but I don’t know what to do about it” (Mark). This was described as one of the shortcomings of TRiM. This was acknowledged by Michael, as he thought that the support offered by TRiM was excellent, highlighting the importance of checking on wellbeing following a difficult job, but this type of support does not cover the smaller jobs that may affect people, “the work in urgent care work can be as stressful as a big trauma job” (Michael). It was also acknowledged that if you were struggling you had to seek support which could be difficult, “it is up to you, they won’t come to you, you have to be accountable for your own well-being” (Greg). Further to this, participants described a lack of understanding regarding why a certain job affected them negatively. This may be due to feelings of overwhelming empathy and difficulties being experienced as a threat to the ambulance clinician’s identity as an emotionally strong individual.

The support offered following a job did not feel sufficient, for instance not being debriefed or not involved in the support offered at a hospital even though, as ambulance

clinicians, they were an integral part of the team, having implications for their value. Similarly, for Steve he described feeling undervalued and his professional competence threatened when hospital staff questioned his decision making, “felt undervalued, carried my job professionally, left resus [resuscitation], left my patient alive and I just decided that this job was not for me” (Steve).

Discussion

Participants volunteered to partake in this study due to their experiences of psychological trauma as a consequence of their role. Exposure to traumatic experiences is essentially an everyday part of the participants' jobs but they described how some jobs were difficult to leave behind and the negative consequences from the accumulation of traumatic exposure. Central to all participants' accounts were the strategies they utilised to help them continue with their work and stay focused, often involving emotional detachment. The strategies involved focusing on technical activities, reminding themselves it was not their family and dehumanisation. This helped to shut out the emotional reactions of family members and the patient (Dyregrov & Mitchell, 1992; Jonsson & Segesten, 2003, 2004; Regehr et al., 2002), whilst also detaching from their own emotions. Strategies of detachment, particularly when a person was severely hurt or deceased, may have fostered positive adaption to the situation (Zuckerman & Gagne, 2003).

Detachment could become more difficult when the participants emotionally connected and identified with the patients, which involved situations that reminded them of their own and their family members' mortality. This was particularly the case when children were involved as it was difficult to ascertain meaning (Nordén, Hult, & Engström, 2014). Identification with victims of injury (particularly children) can be a strong predictor of traumatic stress amongst healthcare staff (Dyregrov, 2002; Dyregrov & Mitchell, 1992; Jonsson & Segesten, 2003) and in this study

participants experienced difficulties associated with post-traumatic stress, such as vivid intrusive memories.

Research involving EMTs has shown that identification with families can enable health professionals to empathise and build a close relationship with patients and families (Bremer, Dahlberg & Sandman, 2012). It has been argued that ambulance clinicians must familiarise themselves and understand the patient's suffering to an extent that allows them to meet their need for care (Bruce, Dahlberg, & Suserud, 2003). This was seen in this study as participants reflected they wanted to do as much as possible to help patients. However, over-empathising with a patient and family may influence reasoning and the ability to make good decisions (Bremer et al., 2012). In this study one participant reflected that understanding and feeling empathy towards a family and patient could result in them becoming overinvolved, more than was comfortable for them and to the detriment of their own mental health.

A more detached approach may lead to less empathy but more rational judgements (Bremer et al., 2012); however, this may be inadequate in meeting the needs of distressed patients and families. One participant felt so detached and lacking in empathy for patients that he felt hostile and cynical towards them, particularly those he described as 'time-wasters'. Previous research has found detachment may encourage ambulance clinicians to see patients as 'outsiders', and encourage a belief that they will never become a patient themselves. This can lead to hostile and cynical attitudes to distress, which can encourage detachment and dehumanising as a way of coping (Haque & Waytz, 2012) and possibly a sign of burnout (Portnoy, 2011). It has been argued that high levels of distress and negative attitudes among ambulance clinicians, is exacerbated by organisational factors such as: long hours; workload; pressure of work; poor support from managers; and misuse of the ambulance service by the

public (Price et al., 2005; Michie & Williams, 2003; Sterud et al., 2011). Burnout has been defined as a collection of symptoms associated with emotional exhaustion and a process that begins gradually and becomes progressively worse, associated with an unsupportive organisational environment or high workload (Stamm, 2010). It can result in depersonalization, reduced personal accomplishments, perfunctory communication and work-related symptoms i.e. quitting the job (Kahill, 1988; Sabo, 2011).

Research into optimal stress management suggests that denial of negative feelings is only a short-term measure for extreme situations (Adshead, 2010). It has also been indicated that strategies such as suppression of emotions, are a significant predictor of burnout and compassion fatigue (Alexander & Klein, 2001; Cicognani, Pietrantonio, Palestini & Prati, 2009). It is important to reengage with the reality of the challenging experience and process what has happened (Ehlers & Clark, 2000). The findings from this study build on the results presented in the meta-ethnography in an earlier section of this thesis, identifying that although detachment may be necessary in order to do the job, it is important to process difficult emotions. Taken together, these findings show that not processing difficult emotions can heighten the cumulative effect of exposure to traumatic events which can lead to significant difficulties and also impact on the quality of patient care.

It appeared important for participants to justify their actions, as they had to hand over responsibility for the patient to other healthcare professionals. For one participant their breaking point was when he felt his professional competence was undermined by A & E staff. Ambulance clinicians liaise with doctors and nurses on a daily basis. There is evidence to suggest that how ambulance clinicians view themselves, their profession and importance of their role, is an important predictor of distress. Lack of recognition for job performance and professional

achievement were found to be positive predictors of low self-worth, and can impact morale (Day, Minichiello & Madison, 2007).

Participants stated they did not understand why a job affected them and found it difficult to admit even to themselves that they had struggled with a job. These negative interpretations about distress may mean they engage in maladaptive strategies to control the intrusions, thus preventing changes in the meaning of the trauma and of the post-traumatic intrusions themselves (Ehlers & Steil, 1995). Society expects ambulance clinicians to be capable of functioning efficiently and not emotionally affected by the difficult situations they encounter in their role (Jonsson & Segesten, 2004); ambulance clinicians may have similar expectations about themselves. These self-perceptions may be affected when they feel vulnerable and their ability to function is affected (Miller, 1995). Additionally, due to the 'macho culture' that typically surrounds the emergency services, this may have dissuaded workers from discussing their real concerns and fears (Regehr et al., 2002).

Participants discussed support from their family or colleagues. Social support from colleagues tended to be centred on their clinical decision making and how to incorporate reflections into future jobs. Such support has been shown to be important in enabling emergency personnel to process traumatic experiences, understand what occurred and to learn lessons and draw conclusions for the future (Elmqvist, et al., 2010; Jonsson & Segesten, 2003; Regehr et al., 2002). Talking about the event, and trying to make the event meaningful appeared to be important for participants and helped them to process what had happened, as seen in other research (Jonsson & Segesten, 2003). Humour was also used with colleagues, a mechanism commonly used to subdue highly charged emotions (Bonanno, Noll, Putnam, O'Neill & Trickett 2003; Scott, 2007).

Implications for practice and further research

Participants spoke about the value of informal support from peers and the importance of time-out after difficult jobs. This emphasises that ambulance clinicians do need an avenue for expressing the impact of their work on their wellbeing (Clompus & Albarran, 2016).

It appeared from this study that information regarding the emotional aspects surrounding different jobs may reduce the confusion regarding what jobs affect them. Participants in this study appreciated managerial staff noticing their distress and signposting them to available support. This study has shown that TRiM has gone some way in recognising what incidents may require support. However, the participants in this study reflected this does not help with smaller incidents and there was individualisation regarding what jobs had an impact. The peer support format of TRiM meant there was difficulty with utilising it. Participants described feeling embarrassed and uncomfortable being vulnerable and admitting distress in front of people they know. TRiM also relies on the individual coming forward and asking for help and it is apparent from this study that this is not always possible. Further research investigating the effectiveness of TRiM with emergency personnel would be beneficial.

Difficulties associated with PTSD can occur almost immediately following a traumatic event, but a diagnosis of PTSD, will not be made for at least one month, to allow a period of 'watch and wait' to occur. This period prior to a formal diagnosis acknowledges that most people will recover from the initial trauma experienced without the need for clinical intervention (National Institute of Clinical Excellence; NICE, 2005; Greenberg et al., 2008). Managerial staff could engage in education and training, which could include psychological first aid for managers, so they can notice the signs and symptoms of trauma and take the necessary action (Everly, Boyle & Lating, 1999; Heffren & Hausdorf, 2014).

This study highlights the challenges ambulance clinicians face in admitting to feeling distressed as well as their reliance on detachment strategies. To help to address these issues, it would be useful to provide information to ambulance clinicians about the range of emotional responses that may develop following a traumatic event; normalising an emotional response but promoting awareness of when to seek professional help. By becoming aware of the underlying emotional component of incidents and recognising affect, it may help to process them. The provision of information of emotional responses to trauma and possible PTSD symptoms, may reduce negative interpretations. Ambulance clinicians who experience difficulties coping with traumatic memories may benefit from understanding that strategies, such as distraction and emotional detachment, can be maladaptive as they maintain difficulties (Ehlers & Clark, 2000).

This study also highlights the barriers to staff utilising the peer support offered by TRiM; as an alternative, a stepped care outreach model including support from managerial staff or named people who have the appropriate training may be beneficial. Occupational health support counselling is unlikely to help in complex cases, therefore specialist trauma therapy delivered by an appropriate professional at an appropriate time is needed. There should be easy access to NICE compliant trauma focused psychological interventions such as Cognitive Behavioural Therapy or Eye Movement Desensitisation Therapy (NICE, 2005). Further research could examine the effectiveness of this approach.

Strengths and limitations

Limitations of the study relate to sample size, gender composition, and the non-representation of ethnic minority groups. It should also be acknowledged that participants were self-selecting and may have been biased towards ambulance clinicians who were more open to talking about the impact of their work. Additionally, due to the self-selecting nature, it is not

possible to know to what extent participants were experiencing psychological trauma. However, this could also be considered a strength of this study as participants were recruited based on their experiences of what they perceived to be psychological trauma, rather than excluding them based on not meeting a threshold. It should be noted that the themes are presented in varying depth. This is due to participants opting to partake in this study to share their own experiences of psychological trauma and this affecting what they chose to focus on in their interviews. Therefore, the themes focusing on emotionally connecting to patients, the psychological impact of their role and implications for support, were talked about in greater depth than the other two themes.

Conclusion

Participants' accounts reflected their experiences of psychological trauma as a result of their job and coping strategies used. Detachment strategies were most commonly used to ensure they could remain focused on the job and not be affected by their own or the patient's emotions. Participants also spoke about the importance of informal support from peers and the difficulties with utilising more formal support, due to embarrassment and not being aware what is available. This study demonstrates how ambulance clinicians can be affected by their work, suggesting the need for specialist support.

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Figures and Tables**Table 1.** Participant demographics

Participant	Gender	Age	Job Role	Years of Service
Katie	F	35	Paramedic	2 years
Mark	M	56	Paramedic	27 years
Steve	M	51	Paramedic	18 years
Michael	M	49	Paramedic (managerial)	20 years
Greg	M	39	EMT 1	4 years

Appendix A

Table 2. Development of over-arching themes

Participant	Focused and detached in order to do the job	“we are only human”: The risks of emotionally connecting	Regaining control and processing the event	The psychological impact and implications for support
1	<p>Focused and detached in order to do the job <i>Focus on the job</i> <i>Not my friends</i> <i>not my family</i> <i>Get on with it</i> <i>Keep going</i> <i>Block it out</i> <i>Push it aside</i> <i>Detachment</i> <i>Prepare for the worst</i> <i>Try to prepare</i> <i>Acceptance</i> <i>Try for the family</i> <i>Heartless</i> <i>Put on a front</i> <i>Don't acknowledge emotions</i> <i>Justify actions</i> <i>Distraction</i></p>	<p>Not feeling prepared and becoming emotionally involved <i>First trauma job</i> <i>Gruesome trauma job</i> <i>Unprepared</i> <i>Extending care</i> <i>Previous MH difficulties</i> <i>Cumulative effect</i> <i>Similarities to own life</i> <i>Empathy/compassion</i> <i>Being assaulted</i> <i>Children are difficult</i> <i>Affect personal life</i> <i>Hard to leave behind</i> <i>Run the event in head</i> <i>Positive feelings when job goes well</i> <i>Worried about something similar happening in their life</i> <i>Worried about family's safety</i></p>	<p>Regaining control and processing the event <i>Humour</i> <i>Reflection</i> <i>Talk to colleagues</i> <i>Quiet place to cry</i> <i>Don't acknowledge emotions</i> <i>Acceptance</i> <i>Finding meaning</i> <i>Run the event in head</i> <i>What if</i> <i>Thinking more in depth about a person's life</i> <i>Visiting patients</i></p>	<p>The importance of understanding and support <i>Not understanding why the job had a negative affect</i> <i>Managers having the knowledge that everyone is different</i> <i>Limited support</i> <i>Support has improved</i> <i>Embarrassed of needing support</i> <i>Acknowledge that different things affect different people</i> <i>Normalisation of MH has improved</i> <i>Want answers from support</i> <i>Not understanding MH</i> <i>Uncomfortable being vulnerable</i> <i>Don't want to speak to people I know</i></p>
2	<p>Focused and detached in order to do the job <i>Focus on the job</i> <i>Detachment</i> <i>Keep going</i> <i>Put it away</i> <i>Heartless</i> <i>Distraction</i> <i>Follow protocol</i> <i>Preparation</i> <i>The heroes</i></p>	<p>What it means to be human: Beyond the uniform <i>Empathy/compassion</i> <i>Similarity to own life</i> <i>Children are difficult</i> <i>Suicide is difficult</i> <i>Confront own fears and vulnerabilities</i> <i>Hard to leave behind</i> <i>Difficult when it someone you know</i> <i>Over involved</i> <i>Unprepared</i></p>	<p>Regaining control and processing the event <i>Compensating for own mistakes</i> <i>Reflection</i> <i>Talk to colleagues</i> <i>Can worry about doing things right</i> <i>Try to find meaning</i></p>	<p>Psychological impact and the need for support <i>Not understanding why the job had a negative effect</i> <i>Inadequate support</i> <i>Stigma has improved</i> <i>Embarrassed that this has affected you</i> <i>Should be stronger</i> <i>Found previous therapy unhelpful</i></p>

	<i>Not my life, not my family</i>	<i>Extending care</i>	<i>Want to know more about what happened</i>	<i>A place for professional help</i>
	<i>Drawing a line</i>	<i>Anger</i>	<i>Perfectionist</i>	<i>Cumulative effect</i>
	<i>Justify actions</i>	<i>Vivid memory</i>	<i>Reassurance</i>	<i>Limited coping strategies</i>
	<i>Put on a front</i>	<i>All of your identity</i>	<i>Justify actions</i>	<i>Previous MH difficulties</i>
	<i>Briefness of the job</i>	<i>Worry about your own family's safety</i>	<i>Keep work and home separate</i>	
	<i>Trauma job</i>	<i>Job impacts personal life</i>	<i>Talking helps to align emotions with facts</i>	
		<i>Bleakness of humanity</i>	<i>Colleagues understand due to similar experience</i>	
			<i>Talk in third person</i>	
			<i>Talk in a mixture of emotions and facts</i>	
			<i>Feedback</i>	
			<i>The green family</i>	
3	Keep focused on the job; despite your own feelings	Depleted of emotions	Regain control to remain detached	The importance of support and implications of stereotypes
	<i>Guided by protocol</i>	<i>Family reactions</i>	<i>Supportive colleagues</i>	<i>Something small affected me</i>
	<i>Focus on the job</i>	<i>Seeing people die is difficult</i>	<i>Reflection</i>	<i>Macho stereotypes</i>
	<i>Detachment</i>	<i>Undervalued</i>	<i>Drink more than you should</i>	<i>Embarrassed about needing help</i>
	<i>Desentised</i>	<i>Professional competence threatened</i>	<i>Support from friends</i>	<i>Connected with the counsellor</i>
	<i>Put on a front</i>	<i>Time wasters are frustrating</i>	<i>Feedback from colleagues</i>	<i>Support in an accessible format</i>
	<i>Justify actions</i>	<i>Stop caring</i>	<i>Faith</i>	<i>Managers knowing when something is wrong</i>
	<i>Lack of compassion</i>	<i>Burnt out</i>	<i>Factual support from colleagues</i>	<i>Colleagues make you feel valued</i>
	<i>Distraction</i>	<i>Cumulative effect</i>	<i>Work and home separate</i>	<i>Not comfortable talking to people you know</i>
	<i>Have a word with yourself</i>	<i>Previous MH difficulties</i>	<i>Knowing he can leave the job if needs be</i>	<i>Stigma improved</i>
		<i>Cynicism</i>		<i>Crying alone</i>
		<i>Impact on ability to do job</i>		<i>Don't talk about feelings</i>
		<i>Impact on personal life</i>		
		<i>Breaking point</i>		
		<i>Not understanding why a job affected you</i>		
		<i>Taking a break from the frontline</i>		
4	Focused and detached in	"we are only human"	Regaining control and	The importance of understanding and support
		<i>Identification</i>		
		<i>Compassion/empathy</i>		

	order to do the job	<i>Children can be difficult Worse when you have your own children Remind you of life's vulnerability Extending care Multiple patients difficult Hard to be honest to people Balance between truth and emotion People you know can be difficult Need distance between difficult jobs</i>	processing the event	<i>Stigma has improved Stigma not where it should be Hard to know when people need support Culture has changed Promotion of available support Different things affect different people Accessibility of support can be an issue</i>
	<i>Acceptance Focus on the job Detached Autopilot</i>		<i>Try to find meaning Reflection Feedback from colleagues Don't want to burden family The importance of talking If you don't talk feelings can resurface Talking to gain clarity Supportive family Supportive colleagues Humour What if</i>	
5	Focused and detached in order to do the job	Not feeling prepared and emotionally connecting	Regaining control and processing the event	The need for nurturing and support
	<i>Detachment Follow protocol Each job as a new job Just a job not a human Justify actions</i>	<i>Balance between truth and emotion Maternity jobs difficult Unpredictable jobs difficult Remind you of life's vulnerability Extending care Contextualising Job enjoyable Rapport with people</i>	<i>Talking helps Feedback from colleagues Support from family Find out what happened Prepare for bad news Hot debriefs Social camaraderie Take time out</i>	<i>worried about being affected relief when not going to big jobs don't want to be a paramedic paramedics hold too much responsibility hard to be around people who are burnt out concerns for university paramedics</i>

Bold Text – Participant Superordinate Theme; Italic Text – Participant Emerging Theme

Table 3. Transcript extract with annotations

Emergent themes	Original Transcript	Exploratory comments		
Vivid memory about the event	<p>P: I can't exactly remember how many years ago, it is not all that long ago anyway his name was Joseph Chadwick and the fact that I will never forget that name, that is significant in that he was a child unfortunately on the next 18th March I have been in service 27 years, 18 months of which was on Probation transport, non-emergency services and then fairly quickly moved on to A&E but yes so this was certainly in the third decade, I have seen a lot before including babies/children but this was a murder, it was his father, he was not married to the mother, but they were a family. It was put down to mainly the father had been to see the Doctor the day before, saying that he had, he had no history of psychological disorder, but he felt disturbed and hear voices and stuff, the Doctor acted quickly from what I know in that he made an appointment immediately, I think the guy had an appointment the following day and the little boy's grandmother was due to look after the little boy the following day and when they didn't turn up at the time she went around and knocked on the door didn't get any answer looked through the letter box and saw her daughter-in-law lying on the floor, she was already dead by then, so the little boy had died as well in response to stab wounds by his father. There was nothing we could have done as it all happened the night before but yes it was very confrontational I have a young family myself, a late starter myself, I didn't become a father until I was 41, I am 55 now. The job got far more difficult, since becoming a family person, I think it must have been six years ago, I think he was eight and my boys were around the same age. So every time I had anything to do with kids, it always hits home and being of a similar age, it is that association of seeing a child of a similar age to yours, makes it even worse. Yeah, and yet there have been many more jobs that have been gruesome and harrowing to see but it is the things that get to me, even though in that case there wasn't any of that, the things that get to me with jobs is the reactions of the family and friends, the actual incident you know is kind of it doesn't really bother me but it is when the relatives are there and getting very upset and that gets to you.</p> <p>But with little [REDACTED] it was when we got there I was with a fairly new paramedic, very competent paramedic, when we got to where it was, there was a police car at the end of the street and I knew them very well, this policeman and I could tell by his face that there was something very badly wrong, we did earlier get something on the screen that there might be an 8 year old involved, not being heard of and no signs of life and stuff like that, he said it is a bad one [REDACTED], two dead on scene, so we carried on down the street and got there and there was Police already there, they had gained entry but the guy had tried to kill himself after that with stab wounds and had nearly succeeded he was barely alive, the house was out of a horror film, it was just horrific, there was blood everywhere, she was lying in the hallway on her front, she was clearly dead and the Policeman the front door was there and slightly to the side was the stairs up and slightly to the side to the hallway she was there and a Policeman sat on the stairs holding the guy up, he was barely conscious and another paramedic in a car had arrived after us, so we got the guy flat, got him into the garden but then I said where was the boy and who has been here to pronounce death as only doctors, nurses and medics can pronounce death, we cannot certify but doctors can do that but we can pronounce death, there was no doctor so nobody pronounce death, who said they are dead so I went upstairs but there was already a WPC outside the door standing and it was the boy's room so yes he was clearly dead because he was cold and stiff but he was just yes lying on his bed and that is the thing that really is very disturbing, one sock on one sock off, shirt, anyway later I heard from one of the officers that an argument had started the evening before between him and his mother and father and he had attacked her in the kitchen and hallway, he had come down to see what all the noise was about and he had apparently received a couple of stab wounds then I don't know how they established that when he was finished with his mother he came upstairs, his boy had run back upstairs to the safety of his room, the place he felt safe and so mmm yeah nothing I could have done I know that but so what is it then I don't know it is a combination of seeing an innocent, the children are the only innocents and the making a mistake of re-running it in your head if he had only run outside to his grandmother and then this man, I don't care, I can't get my head around it, I can get my head around two adults fighting but then to purposefully go upstairs anyway that was that really so it doesn't bother me every day and I don't know how it does bother me, I know rationally there was nothing I could have done, so I guess it is the sadness, the fact that it had happened, many years before that went to a 11 year old girl who had been on a country run at school and we got it as a report, this was in the late 90s I had not long qualified as a paramedic in 1995 and I had just done funded paediatric life support course, which was really on the ball, and we got this as a 12 year old but she was 11 had fallen and had a head injury, when we arrived and the school was like, you could see it across the road from the hospital and it was raining very lightly and it turned out when we arrived they were doing CPR, school nurse and someone else, what it had gone to cardiac arrest, but anyway she was in cardiac arrest we</p>	<p>He can remember significant details about the event.</p> <p>He had been in the service for a long time and moved through the services which had meant that he had seen a lot already but this particular event had been distressing for him.</p> <p>Babies/children seen as a particularly bad event</p> <p>Knows a lot about the case. Did he find out more about the person and what led to this murder? He wanted to know more about the case</p> <p>Feeling empathy for the family and what they had been through. Wanting to know more but did this lead to increased distress?</p> <p>Understanding that there was nothing more they could have done but acknowledging that it has caused him distress and possible reasons why.</p> <p>He has his own family and children which meant he identified with this particular case. Also, since having children the job has become harder because of this identification to your own children and reminding you of their vulnerability or how you would feel if something happened to them.</p> <p>Feeling empathy for the relatives can be more distressing than the event itself. Having to extend care to them also</p> <p>Terms of endearment – like he knew the child?</p> <p>Shows the extent of identification</p> <p>Was not made aware before the full extent of what had happened. Not being able to prepare himself fully.</p> <p>Horrific scene – lots of things going on, Can remember the scene – vivid memory of the scene</p> <p>Memory now is a mixture between what he had seen, what he has found out and how he has appraised the event and what happened. Thinking about what the child and mother had experienced, trying to understand and make sense of what happened.</p> <p>Children are difficult because they are young and innocent. He cannot comprehend why someone would do this to a child and feels there is no excuse or reasons as to why they would and feels angry about this.</p> <p>He has thought about this event a lot trying to obtain meaning but he can't. Thinking a lot about the 'what ifs'. This has resulted in more distress.</p> <p>Anger mixed with sadness.</p>		
Identification Children are difficult				
Wanting to find out more Empathy				
Identification Similarity to himself				
Extending care Identification				
Unprepared				
Trauma job				
Vivid memory Finding more about the event				
Children are difficult Anger Re-run it repeatedly in head What if Try to find meaning Anger Sadness				

<p>Children are difficult</p> <p>Children are difficult</p> <p>Justifying actions</p> <p>Wanting to find out more</p> <p>Certain jobs more difficult</p> <p>Suicide is difficult</p> <p>Confront own fears and vulnerabilities</p>	<p>had to get her into the ambulance to shock her which at the time a 12 year old was the minimum age but you know there was no chance, we gave her two shocks, two colleagues trying to go to the arrow line and they worked on her for another hour doing the chest and massage of the heart and later they let us know that it was a congenital defect, she had, it was the cross country run that brought it about, she had this congenital disorder that was waiting to happen yes I was completely gutted after the job ended, even though I knew I had done everything I could. This is a long time before I had children, um um I think it is the element of it being children, innocence, a driver is drunk and obliterates himself into a wall you know he may be a father and a good person whatnot yeah that doesn't serve as much, urm, hangings they are horrible as well. Hangings really get you because the anguish before a lot of people say they are cowards it takes some guts to do that and it must have been bad to yeah, those that can be very confronting, make you confront your own mortality and vulnerabilities</p> <p>I: In what way?</p> <p>P: Well in that it could be you. Urm how much does it take before it gets to that point</p>	<p>Children are very difficult to deal with.</p> <p>Trying their best to save this child although they know there is little chance. Finding out more following the job to ascertain the reasons why this child had died. Justifying actions? I did all I could.</p> <p>Children are difficult because they are innocent, they haven't lived their life or hurt anyone.</p> <p>Suicide can be difficult due to identification. It reminds you of your own vulnerabilities and mortality – the fragility of life?</p> <p>Thinking more in depth about the person and what they must have been going through to have gotten to this point. Not just attending to the job but thinking about the person involved in the job.</p> <p>This could happen to anyone even you. Makes you think about the line between being ok and coping to not and taking your own life. What does it take for a person to be at that point?</p>
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Appendix B

Journal of Traumatic Stress author guidelines

Author Guidelines

1. **Online Submissions:** The *Journal of Traumatic Stress* accepts submission of manuscripts online at:

<http://mc.manuscriptcentral.com/jots>

Information about how to create an account or submit a manuscript may be found online on the Manuscript Central homepage in the "User Tutorials" section or, on the Author Dashboard, via the "Help" menu in the upper right corner of the screen. Personal assistance also is available by calling 434-964-4100.

2. **Article Formats:** Three article formats are accepted for consideration by JTS. All page counts should include references, tables, and figures. *Regular articles* (30 pages maximum, inclusive of all text, abstract, references, tables, and figures) include research studies, quantitative systematic reviews, and theoretical articles. Purely descriptive articles or narrative-based literature reviews are rarely accepted. In extraordinary circumstances, the editors may consider longer manuscripts that describe highly complex designs or statistical procedures but authors should seek approval prior to submitting manuscripts longer than 30 pages. *Brief reports* (18 pages maximum) are appropriate for pilot studies or uncontrolled trials of an intervention, preliminary data on a new problem or population, condensed findings from a study that does not merit a full article, or methodologically oriented papers that replicate findings in new populations or report preliminary data on new instruments. *Commentaries* (1,000 words or less) involve responses to previously published articles or, occasionally, invited essays on a professional or scientific topic of general interest. Response commentaries, submitted no later than 8 weeks after the original article is published (12 weeks if outside the U.S.), must be content-directed and use tactful language. The original author is given the opportunity to respond to accepted commentaries.
3. **Double-Blind Review:** As of January 1, 2017, the Journal of Traumatic Stress utilizes a double-blind review process in which reviewers receive manuscripts with no authors' names or affiliations listed in order to ensure unbiased review. To facilitate blinded review, the title page should be uploaded as a separate document from the body of the manuscript, identified as "Title Page," and should include the title of the article, the running head (maximum 50 characters) in uppercase flush left, author(s) byline and institutional affiliation, and author note (see pp. 23-25 of the APA 6th ed. manual). Within the main body of the manuscript, tables, and figures, authors should ensure that any identifying information (i.e., author names, affiliations, institutions where the work was performed, university whose ethics committee approved the project) is blinded; a simple way to accomplish this is by replacing the identifying text with the phrase "[edited out for blind review]". In addition, language should be used that avoids revealing the identity of the authors; e.g., rather than stating, "In other research by our lab (Bennett & Kerig, 2014), we found ..." use phrases such as, "In a previous study, Bennett and Kerig (2014) found ..." Please note that if you have uploaded the files correctly, you will **not** be able to view the title page in the PDF and HTML proofs of your manuscript; however, the Editor and JTS editorial office staff can view this information.

4. **Preferred and Non-Preferred Reviewers:** During the submission process, authors may suggest the names of preferred reviewers; authors also may request that specific individuals not be selected as reviewers.
5. **Publication Style:** JTS follows the style recommendations of the 2010 *Publication Manual of the American Psychological Association* (APA; 6th edition) and submitted manuscripts must conform to these formatting guidelines. Manuscripts should use non-sexist language. Manuscripts must be formatted using letter or A4 page size, with 1 inch (2.54 cm) margins on all sides, Times New Roman 12 point font (except for figures, which should be in 12 point Arial font), and double-spacing for text, tables, references, and figures. Submit your manuscript in .doc or .docx format.

For assistance with APA style, in addition to consulting the manual itself, please note these helpful online sources that are freely available: <http://www.apastyle.org/learn/tutorials/basicstutorial.aspx> and <https://owl.english.purdue.edu/owl/section/2/10/> .

6. **APA and JTS Style Pointers:** In addition to consulting the APA 6th edition Publication Manual, the resources indexed above, and the JTS Style Sheet posted online, please consider these pointers when formatting each section of the manuscript:
 - i. **Tense:** Throughout the manuscript, please use past tense for everything that has already happened, including the collection and analyses of the data being reported.
 - j. **Abstract:** The Main Document of the manuscript should begin with an abstract no longer than 250 words, placed on a separate page. In addition, JTS house style requires the reporting of an effect size for each finding discussed in the abstract; if there are many findings, present the range.
 - k. **Participants:** Please include in this subsection of the Method section information on sample characteristics, subsample comparisons, and analyses that describe the sample but are not focused on testing the hypotheses that are the aims of your manuscript.
 - l. **Procedure:** Please describe the procedure in sufficient detail so that it could be comprehended and replicated by another investigator. Identify by name the IRB or ethics committee (edited out for blind review in the submitted manuscript) that approved the research, and the manner in which consent was obtained.
 - m. **Measures:** In addition to providing citations, psychometric, and validation data for each measure administered, please provide coefficient alpha from your data for each measure for which this is appropriate.
 - n. **Data Analysis:** Include a separate subsection with this header in the Method section in which you describe the analyses performed, the software program(s) used, and make an explicit statement about missing data in your data set. If there are no missing data, so state; otherwise describe the extent of missing data and how they were handled in the data analyses.

- o. **Results** (and throughout): Present percentages to 1 decimal place, means and *SDs* to 2 decimal places, and exact *p* values to 3 decimal places except for any $< .001$. Include leading zeros (e.g., 0.92) when reporting any statistic that can be greater than 1.00 (or less than -1.00). For example, there is no leading zero used when reporting correlations, coefficient alphas, standardized betas, *p* values, or fit indices (e.g., $r = .47$, not 0.47). Report effect sizes for analyses conducted wherever possible and appropriate.
- p. **References:** Format the references using APA 6th edition style: (a) begin the reference list on a new page following the text, (b) double-space, (c) use hanging indent format, (d) italicize the journal name or book title, and (e) list alphabetically by last name of first author. Do not include journal issue numbers unless each volume begins with page 1. If a reference has a Digital Object Identifier (doi), it must be included as the last element of the reference.

(1) Journal Article:

Kraemer, H. C. (2009). Events per person-time (incidence rate): A misleading statistic? *Statistics in Medicine*, 28, 1028–1039. doi: 10.1002/sim.3525

(2) Book:

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

(3) Book Chapter:

Meehl, P. E. (2006). The power of quantitative thinking. In N. G. Waller, L. J. Yonce, W. M. Grove, D. Faust, & M. F. Lenzenweger (Eds.), *Essays on the practice of scientific psychology* (pp. 433–444). Mahwah, NJ: Erlbaum.

- l. **Footnotes:** Footnotes should be avoided. When their use is absolutely necessary, footnotes should be formatted in APA style and placed on a separate page after the reference list and before any tables.
- m. **Tables:** Tables should be formatted in APA 6th edition style and should be placed after the references in the body of the manuscript. Please use Word's Table function to construct tables, not tabs and spacing. Tables should be numbered (with Arabic numerals) and referred to by number in the text. Each table should begin on a separate page. Please make tables double-spaced, decimal align all numeric columns, and use sentence case for labels.

Each datum should appear in its own cell (e.g., do not include *SDs* in parentheses following *Ms* but instead create a separate column for *SDs*). When reporting a table of intercorrelations, fill the rows first and then the columns such that any empty cells are in the lower left-hand quadrant of the table; use dashes in any redundant cells indicating the correlation of a variable with itself. Report exact *p* values to three decimal places (e.g., $p = .043$) wherever possible; however, if doing so would make the table unruly (e.g., in a table

of intercorrelations), it is permissible to use asterisks to indicate p values at the traditional cut-off points (e.g., * $p < .05$. ** $p < .01$. $p < .001$).

Color in tables: Color can be included in the online version of a manuscript at no charge; however use of color in the print version of the journal will incur additional charges (currently \$600 per figure or table). If you wish to include color in only the online version, please ensure that each table will be legible in greyscale when it is published in the print version; for example, lines of different colors may be discriminable from one another when viewed in color but may not appear to be different from one another in greyscale.

- n. **Figures:** All figures (graphs, photographs, drawings, and charts) should be numbered (with Arabic numerals) and referred to by number in the text. Each figure should begin on a separate page. Place figures captions at the bottom of the figure itself, not on a separate page. Include a separate legend to explain symbols if needed. Please use Arial font

throughout except for the caption, which should remain as Times New Roman. Use sentence case for titles and labels. Figures should be in Word, TIF, or EPS format.

Color in figures: Color can be included in the online version of a manuscript at no charge; however use of color in the print version of the journal will incur additional charges (currently \$600 per figure or table). If you wish to include color in only the online version, please ensure that each figure will be legible in greyscale when it is published in the print version; for example, lines of different colors may be discriminable from one another when viewed in color but may not appear to be different from one another in greyscale.

19. **Uploading Files:** After the separate Title Page has been uploaded as a Word file (.doc or .docx), the remaining text (abstract, main body of the manuscript, references, and tables) should be uploaded as a separate **single** Word file (.doc or .docx) designated as "Main Document." Figures may be either included in the main document or uploaded as separate files if in a non-Word format.

20. **Supplementary Materials.** Authors may wish to place some material in the separate designation of "Supplementary file not for review," which will be made available online for optional access by interested readers. This material will not be seen by reviewers and will not be taken into consideration in their evaluation of the scientific merits of the work, and will not be included in the published article. Material appropriate for such a designation includes information that is not essential to the reader's comprehension of the study design or findings, but which might be of interest to some scholars; examples might include descriptions of a series of non-significant posthoc analyses that were not central to the main hypotheses of the study, detailed information about the content of coding system categories, and CONSORT flow diagrams for randomized controlled trials (see below). Note well that the manuscript must stand on its own without this material; consequently, critical information reviewers and readers need to evaluate or replicate the study, such as the provenance and psychometric properties of the measures administered, is not appropriate for placement into Supplementary Materials.

21. **Statement of Ethical Standards:** In the conduct of their research, author(s) are required to adhere to the "Ethical Principles of Psychologists and Code of Conduct" of the American Psychological

Association (visit <http://www.apa.org/science/leadership/research/ethical-conduct-humans.aspx> for human research or <http://www.apa.org/science/leadership/care/guidelines.aspx> for animal research) or equivalent guidelines in the study's country of origin. If the author(s) were unable to comply when conducting the research being presented, an explanation is required.

All work submitted to the *Journal of Traumatic Stress* must conform to applicable governmental regulations and discipline-appropriate ethical standards. Responsibility for meeting these requirements rests with all authors. Human and animal research studies typically require prior approval by an institutional research or ethics committee that has been established to protect the welfare of human or animal participants.

Data collection for the purposes of providing clinical services or conducting an internal program evaluation generally does not require approval by an institutional research committee. However, analysis and presentation of such data outside the program setting may qualify as research (which is defined as an effort to produce generalizable knowledge) and thus may require approval by an institutional committee. Those who submit manuscripts to the *Journal of Traumatic Stress* based on data from these sources are encouraged to consult with a representative of the applicable institutional committee to determine whether approval is needed. Presentations that report on a particular person (e.g., a clinical case) also usually require written permission from that person to allow public disclosure for educational purposes, and involve alteration or withholding of information that might directly or indirectly reveal identity and breach confidentiality.

To document how these guidelines have been followed, authors are asked to identify in the online submission process the name of the authorized institution, committee, body, entity, or agency that reviewed and approved the research or that deemed it to be exempt from ethical or Internal Review Board review. Although blinded at the time of submission, the name of the IRB or ethics committee that approved the research, and the manner in which consent was obtained, also should appear in the Procedure subsection of the Method in the body of the report.

22. **Randomized Clinical Trials:** Reports of randomized clinical trials should include a flow diagram and a completed CONSORT checklist (available at <http://www.consort-statement.org>) indicating how the manuscript follows CONSORT Guidelines for the reporting of randomized clinical trials. The flow diagram should be included as a figure in the manuscript whereas the checklist should be designated as a "Supplementary file not for review" during the online submission process. Please visit <http://consort-statement.org> for information about the consort standards and to download necessary forms.
23. **Systematic Reviews:** Reports of systematic reviews follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (<http://www.prismastatement.org/documents/PRISMA%202009%20checklist.pdf>) and should be accompanied by a flow diagram (<http://www.prisma-statement.org/PRISMAStatement/FlowDiagram.aspx>) mapping out the number of records identified, included, and excluded, and the reasons for exclusions.
24. **Writing for an International Readership:** As an international journal, the *Journal of Traumatic Stress* avoids the use of operational code names or nicknames to describe military actions, wars, or

conflicts, given that these may not be equally familiar or meaningful to readers from other nations. Helpful guides for clear and neutral language for reporting on military-based research can be found at the following webpages: the ISTSS newsletter *StressPoints*

([http://www.istss.org/educationresearch/traumatic-stresspoints/2015-march-\(1\)/media-matters-what%E2%80%99s-in-a-name-using-military-code.aspx](http://www.istss.org/educationresearch/traumatic-stresspoints/2015-march-(1)/media-matters-what%E2%80%99s-in-a-name-using-military-code.aspx)), the *International Press Institute*

(<http://ethicaljournalismnetwork.org/assets/docs/197/150/4d96ac5-55a3396.pdf>) and the *Associated Press Stylebook and Briefing on Media Law*

(<http://www.apstylebook.com/?do=help&q=48/>). In addition, authors are encouraged to give consideration to whether particular research findings might be culturally-specific rather than universally established; e.g., prevalence rates derived from samples consisting of all-US participants should be identified as such.

25. **Originality and Uniqueness of Submissions.** Submission is a representation that neither the manuscript nor substantive content within in it has been published previously nor is currently under consideration for publication elsewhere. A statement transferring copyright from the authors (or their employers, if they hold the copyright) to the International Society for Traumatic Stress Studies will be required after the manuscript has been accepted for publication. Authors will be prompted to complete the appropriate Copyright Transfer Agreement through their Author Services account. Such a written transfer of copyright is necessary under U.S. Copyright Law in order for the publisher

to carry through the dissemination of research results and reviews as widely and effectively as possible.

26. **Pre-Submission English-Language Editing:** Authors for whom English is a second language may choose to have their manuscript professionally edited before submission to improve the English. Japanese authors can find a list of local English improvement services at

<http://www.wiley.co.jp/journals/editcontribute.html>. All services are paid for and arranged by the author, and use of one of these services does not guarantee acceptance or preference for publication.

27. **Page Charges:** The journal makes no page charges. The only exception to this, as noted above, is if authors wish tables or figures to be printed in color.

28. **Author Services:** Online production tracking is available for your article through Wiley-Blackwell's Author Services. Author Services enables authors to track their article—once it has been accepted—through the production process to publication online and in print. Authors can check the status of their articles online and choose to receive automated emails at key stages of production. Authors will receive an email with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete email address is provided when submitting the manuscript. Visit <http://authorservices.wiley.com/> for more details on online production tracking and for a wealth of resources including FAQs and tips on article preparation, submission, and more. Corresponding authors: In lieu of a complimentary copy free access to the final PDF offprint of your article will be available via Author Services only. Please therefore sign up for Author Services if you would like to access your article PDF offprint and enjoy the many other

benefits the service offers. Should you wish to purchase reprints of your article, please click on the link and follow the instructions

provided: <https://caesar.sheridan.com/reprints/redir.php?pub=10089&acro=JTS>

29. **OnlineOpen** : The *Journal of Traumatic Stress* accepts articles for Open Access publication. Please visit <http://olabout.wiley.com/WileyCDA/Section/id-828081.html> for further information about OnlineOpen.
30. **NIH Public Access Mandate**: For those interested in the Wiley-Blackwell policy on the NIH Public Access Mandate, please visit our policy statement at www.wiley.com/go/nihmandate

Section Three: Critical Appraisal

Lauren Rutter

Doctorate in Clinical Psychology

Division of Health Research, Lancaster University

Summary of Research and its Findings

The research paper, “Ambulance Clinicians’ experience of psychological trauma: An Interpretative Phenomenological Analysis” involved the interview of five individuals to explore their experiences of psychological trauma as a result of their role. Interviews were analysed using Interpretative Phenomenological analysis (IPA), from which four themes were constructed. The first theme related to experiences of being focused and detached from patients to enable them to do their job; the second described the challenges with remaining detached from patients due to the nature of some jobs and the difficulties that could arise from this; the third captured the strategies used to help regain control and process a difficult job; and the final theme encompasses the difficulties associated with psychological trauma resulting from their role, and the importance of support but the difficulties in utilising it.

The participants described strategies they drew upon to help them survive the nature of their work, which involves being exposed to potentially traumatic events. There were times when their work did have an impact on them emotionally but from participants’ accounts they also had strategies in place to help them cope, for example by speaking informally to colleagues regarding how they performed on the job and using humour. Additionally, participants would sometimes follow up on a patient from a job. This was often when they struggled with the brief encounter, not knowing what happened to the patient and wanted to ensure they helped as much as they could or to ascertain meaning.

It was perceived by some participants that it was embarrassing to talk about emotions and admit if a certain job had affected you. It was acknowledged that stigma was improving regarding emotions and mental health difficulties, were reducing. However, participants spoke about the stigma they directed towards themselves. They often found it difficult to admit to

themselves that they were struggling. This has implications with regards to them accessing formal support. Participants anticipated that others would not respond negatively towards them if they did disclose difficulties; however, they did not want others to perceive them as vulnerable or weak.

Many of the strategies utilised involved detachment and distancing themselves from their own emotions. This was to allow them to focus on the job and do what it is they are meant to do; that is to save lives. However, some participants did not allow themselves to acknowledge any difficult feelings they experienced when they resurfaced following the job. Consequently, this meant that the traumatic event was not processed. One participant drew on this strategy frequently, resulting in what he described as his “bucket of emotions” available for other people becoming depleted very easily. This was apparent during the interviews, as some participants reflected that the difficult jobs were tough to talk about and had made them realise that they had not come to terms with what had happened. Participants described difficulties they had experienced because of certain jobs, such as nightmares, intrusive memories and rumination on a job.

All participants were very willing and enthusiastic about participating in this research, with four of the participants citing how important they felt this research was and appeared very thankful that this research was being undertaken. There was an apparent mismatch between being embarrassed about struggling or being impacted by their job, whilst being keen to share their experience. Participants also ascribed this to the stigma they had towards themselves; internalisation is an integral part of stigma and what makes it so powerful. This suggests that the ambulance service needs to support its staff to understand that emotional responses are normal following a traumatic event.

It appeared that some participants used this research process as a therapeutic opportunity for them to speak about their distress, which led to some conflict for me between my role as a researcher and as a clinician. This critical appraisal will be used to reflect further on this conflict, how this played out within the research process and how my own personal and contextual subjectivity has interacted with the research process. Additionally, the self-selection sampling process used for this study will be considered.

Self-selection sampling

This study implemented a self-selection approach to sampling. This meant that information regarding what psychological trauma may entail was provided on the recruitment poster and participants contacted the researcher if they felt they met these criteria and would like to participate. On the poster advertising the study, the information on what psychological trauma may involve was based on the Diagnostic Statistical Manual-V (DSM-V; American Psychiatric Association; APA, 2015), diagnostic criteria of Post-Traumatic Stress Disorder (PTSD). This included difficulties such as nightmares and intrusive memories to give participants an understanding of what psychological trauma may entail but did not require them to meet a certain number of symptoms as is required for a diagnosis of PTSD. Providing this information was not only important to ensure clarity about what this study was looking for but also from discussions with my field supervisor (advanced paramedic) and a blue light champion in devising the study and study materials, they highlighted to me that trauma, to ambulance clinicians, means physical trauma, such as an arm hanging off!

Additionally, this approach was chosen as I did not want to exclude people who felt they had experienced psychological trauma but did not meet a threshold on a psychometric measure such as the Posttraumatic Checklist- 5 (Weathers et al., 2013). It is expected that majority of

ambulance clinicians will have witnessed a criterion A event required for a diagnosis of PTSD in the DSM-V (APA, 2015). Criterion A requires that the person was exposed to: death, threatened death, actual or threatened serious injury or actual or threatened violence, which can be direct, indirect, witnessing in person or repeated or extreme indirect exposure to adverse details of the event usually in the course of professional duties (APA, 2015). In the literature it has been acknowledged that ambulance clinicians and other emergency responders are affected by smaller scale events (Halpern, Gurevich, Schwartz & Brazeau, 2009). It has been suggested that these smaller scale jobs require them to show empathy and interaction with the patient and their families to provide good care, which has implications for detachment, and may be more difficult than the big scale events which require them to utilise more technical aspects of their professional training. Therefore, I was interested in what the ambulance clinicians' experiences of psychological trauma were and the personal meanings behind why this was traumatic for them (Ehlers & Clark, 2000). To illustrate the value of this approach, a participant in this study found the most difficult event was one in which his identity as a practitioner was undermined. This connected to other experiences in his life and childhood. This may have been missed using DSM-V criteria of a criterion A event and psychometric measure thresholds.

Participants were included regardless of whether they had accessed previous support or not. It was also not a requirement that they had to be experiencing the distress associated with the traumatic event now. Due to this, there was a possibility that people recruited to the study had unresolved difficulties. Consequently, some participants appeared to use this research for therapeutic reasons. This topic will be addressed in-depth in the following section of this critical appraisal.

Research or therapy: The importance of reflexivity

Reflexivity is accepted as a way of enhancing rigour and credibility in qualitative research (Alvesson, 2011). The importance of researcher reflexivity in qualitative research is undisputed (Smith, Flowers & Larkin, 2009). Reflexivity has been defined as “the capacity of the researcher to turn back on his or her experience, and then use this material to inform the process of enquiry” (McLeod, 2011, p. 48). The process of reflexivity can provide guidance beyond a principle-based approach to manage ethical moments, suggesting reflexivity has a role in enhancing the ethical aspects of research (Hewitt, 2007; Townsend, Cox & Li, 2010).

I think that processes could have been employed to enhance reflexivity and the quality of my research. It would have been useful to undertake a bracketing interview to ensure that I was aware of my assumptions and attitudes in the context of the phenomenon I was investigating. Additionally, member checking would have been useful to explore the credibility of my results by checking for accuracy and resonance with participants experiences. It must be noted that reflection was carried out throughout the research process by keeping a reflective diary to keep notes and reflections throughout the project. I noted my thoughts regarding emerging themes and their connections, and how I had felt following each interview. For example, one of my reflective diary extracts focused on how I had felt following an interview,

Left this interview feeling quite shocked and upset. I was aware before starting the interviewing that participants may find it difficult. I did not expect someone to need support so much that they would use this research process to gain that in some way. Felt so odd speaking to him about very difficult things then just leaving and not seeing him again. How difficult it must be to be struggling but not feel like you can talk about it formally in your job role (extract from reflective diary).

Some themes have been used to inform the writing of this critical appraisal. However, from also writing this critical appraisal, as I look back at the process, new reflections have been formed.

A phenomenological approach to qualitative research emphasises an empathic, rapport building stance to the interviewee. There has been an aim to reduce the hierarchical and authoritative position in which researchers have traditionally been placed to “minimise the distance and separateness of researcher-participant relationships” (Karnieli-Miller, Strier & Pessach, 2009, p.279). However, there appeared to be instances in the interviewing process whereby the researcher-participant relationship had gone or had the potential to go beyond these guidelines, whereby reflexivity was important to notice these occasions.

There were times where I felt participants were using the research interview as a therapeutic opportunity to discuss their feelings and at times seek reassurance. Research interviews can mirror therapeutic interviews in that they both provide a space for people to talk about their experiences to someone who really wants to listen (Duncombe & Jessop, 2002). The differences between a therapeutic interview and a research interview is that in a therapeutic interview, the therapist is listening to the person and helping them, whereas in a research interview the participant is helping the researcher by providing information (Birch & Miller, 2000). From the themes that emerged from the data, it was apparent participants found seeking or utilising support difficult. I wondered if the participants who opted to take part in this study may have framed it as helping someone out with their research, from which they may also achieve some benefit.

It has been documented that people hope to benefit from research even when researchers are explicit about the lack of likely direct benefit (Glannon, 2006). For example, an email from a

potential participant stated that they would “be interested in helping out with your study if it is useful”. This goes hand in hand with their identity as an ambulance clinician, who are ordinarily ‘fixing’ other people and they can find it difficult to be the person who needs help or ‘fixing’. This may provide some explanation as to why seeking support may be difficult, as they do not want to be perceived as the people who require help. By being able to participate in the research, they have an opportunity to discuss how they are feeling without the perceived stigma of admitting they have been affected, asking for help or attending mental health services, whilst framing it in their own mind that they are doing someone a favour.

As I am not part of the ambulance clinicians’ field and I am also a trainee clinical psychologist, there may have been an expectation that not only would I be likely to have an objective stance towards the ambulance service, but I am also from a profession whose job it is to understand. Thus, this may have allowed them to be more open and honest about their experiences. When participants are interviewed by someone in their field they may feel their clinical practice is being judged which may lead them to mistrust the researcher (Chew-Graham, May, & Perry, 2002) with hidden agendas for undertaking or participating in research (McConnell-Henry, Chapman & Francis, 2009). This could also have an impact on seeking support as they may feel that managerial staff may be trying to find out who is struggling.

It has been noted that some aspects of qualitative interviews mirror therapeutic interviews (Gale, 1992) and therefore may mean that participants can find the research interview therapeutic. This can create challenges in managing boundaries between research and therapy as both require similar skills such as empathy and listening skills, particularly interviews on sensitive topics (Corey, Corey & Callanan 2003; Minichiello, Aroni, Timewell & Alexander, 2000). It is important to encourage participants to speak openly and to tell their personal stories

but without allowing the interview to turn into a therapy session, which can be a difficult balance to manage. Although participants were informed on the information sheet that they were unlikely to benefit directly from the research, this was in the middle of many bullet points. It has been suggested that participant information sheets for studies in which there may be some therapeutic benefit to participants should make it clear to participants that the “primary goal of research is to gain new knowledge and that participating in a research study may or may not clinically benefit them” (Snyder & Mueller, 2008, p.24).

Being reflexive allows recognition and management of the tensions between clinician and researcher roles as they occur. For one participant I found managing these boundaries difficult as it appeared he was seeking a therapeutic approach. At times, I felt I was being placed into the ‘therapist’ role. This was both challenging to navigate and uncomfortable. This has been documented previously and it has been stated that a level of insight is necessary to shift that focus to exploring the participant’s experiences rather than it being a clinical encounter (Fisher, 2011; Hunt, Chan & Mehta, 2011). As a researcher my role is to listen to the participant without interfering with their responses, as the interview process is one where the participant’s words and meanings are of paramount interest. This participant appeared to be seeking reassurance and answers to his questions about why he felt a certain way or how to look at things differently. In the moment when he was asking these things, I noticed that I wanted to validate, reflect and re-frame his response, as I would if this was a therapeutic encounter. At one point during the interview, I believe I did re-frame and offered psychological insight into what he had experienced. However, this demonstrates that I had stepped into an important aspect of role confusion between my researcher and clinician role. His desire for therapy and my dual role as a clinician and a researcher may have meant that my subjectivity and wanting to contain his

distress, may have impacted on the interaction. This meant that offering this reflection and encouragement, may have meant that we related in a quasi-therapist-client arrangement.

There is a danger here as this could mislead the participant by creating the ground for a creation of a bond that was not related to the task and have no on-going element to it. This may leave the participant, and me as the researcher, confused. However, I believe that by being reflexive in the moment, I was aware of how I was feeling which helped me not to confuse roles further or to cross boundaries. This awareness allowed me to stop and manage this conflict as it occurred and try to respond in a way that was more appropriate, as we were in a research domain. However, I did leave the interview feeling upset, which I believe was due to being put in a therapist role by the participant but not being able to offer this which I was not expecting. I discussed this in supervision and as it happened in the early stage of data collection it meant this was mindfully retained for the remaining interviews.

Upon thinking about the interviews, it has made me reflect on the issues of only having one meeting with people in a research situation; they tell me about their difficulties and open up to me about things that are clearly very painful and which they may not have spoken to anyone about previously. The ambulance clinicians' ways of coping as described in this study involve methods of distraction, avoidance, suppressing things and 'keeping going'. However, I am essentially opening a door that they may have kept firmly shut, then at the end of the interview point them in the direction of support and leave them with this door open. This felt odd and uncomfortable, particularly with the participant I discussed earlier. This was due to our interview being the only interaction I would have with this participant and I would not know what happened to him, when it appeared to me he needed and wanted support.

This feeling of wanting to find out more and offer someone more support, seems similar to how the ambulance clinicians report feeling when they have an emotional connection with patients. From reflecting following that interview, and in writing this critical appraisal, I have gained further insight into why some participants followed up patients by attending funerals or visiting them in hospital. Furthermore, even though we may have strategies in place to try and protect ourselves, we are only human, and things will affect us. This emphasises the importance of supervision and support.

Although in some ways this interview may have been positive as it meant that I could point the participant in the right direction to obtain support, this also left me wondering what would have happened if he had not taken this opportunity. Would he have continued to struggle on his own? Following this interview has he continued to struggle on his own? This further highlighted to me that there is something not quite right or missing in the current culture of the ambulance service or support offered that meant this participant, as he put it, 'jumped at the chance' to participate in the research. By talking about their difficulties, participants may have become aware that they were not dealing with them as well as they thought and that they do need additional support.

Research involving sensitive topics can mean listening to people talk about highly personal aspects of their lives, which could raise some unresolved issues. This left me wondering about the ethical implications of research, particularly if people have not had support for their difficulties before. It has highlighted to me the importance of being aware if a participant is becoming distressed and seeking ongoing consent by asking if the participant wants to carry on and checking they are OK. It also highlights the importance of debriefing the person, and talking through the feelings that may have been aroused (Alty & Rodham, 1998). With one participant, I

spent some time debriefing him following the interview, ensuring he knew about the support available, talking these options through and grounding him in the 'here and now'. This is important to contain participants, as finishing the interview when an individual is in distress due to aroused emotions is dangerous. In this case in particular a simple debrief sheet would have not sufficed. Debriefing the participant and grounding them in the 'here and now' were aspects of the interview process that I did include in my ethics application, as I knew it was possible that people may have difficult feelings aroused. Therefore, debriefing may be an opportunity to use clinical skills in a less ambiguous and troublesome way than during the interview.

This process made me reflect on other researchers who carry out qualitative research involving difficult subjects. I am nearing the end of clinical psychology training and have developed skills in managing boundaries, containing individuals' distress, managing people requiring grounding techniques, being aware of support they may need and risk assessment. However, I found it difficult to be put in a therapist role when I was not expecting to be and found it tricky to navigate the roles of researcher-clinician,

I work as a clinician majority of the time and part of this is being alongside people and validating their experiences and being able to offer continued support. It has been difficult that participants have asked for support, advice/guidance and really difficult trying to navigate that as I am in a researcher role. How do people who haven't got clinical backgrounds manage this – must be tricky (excerpt from reflective diary).

Researchers that do not have a clinical background may not feel they are adequately trained to debrief participants and may feel they are doing more harm than good (Alty & Rodham, 1998). It is apparent that researchers need to be aware of the possibility that boundaries between research and therapy can become blurred for some participants and have strategies to try

and cope with that. Additionally, it is important to recognise when individuals require a more in-depth debrief when conducting research with populations where trauma or extreme distress is discussed. This is certainly something I will take forward with me in any future research I carry out or supervise.

Conclusion

In this critical appraisal I have provided a reflective account on two aspects of the research process. First, I considered the decision to use a self-selection approach to sampling and how I felt it was important to consider personal meanings of why an event becomes traumatic. Secondly, I considered the research process as being potentially therapeutic for some participants and the difficulties this can cause for maintaining boundaries in research. I reflected on the difficulties I had experienced in being put in a therapist role and the similarities of feelings I experienced to what the ambulance clinicians described experiencing. The importance of reflexivity was also considered in increasing awareness of any possible role conflict that may occur and ensuring strategies are in place to help cope with this.

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Section Four: Ethics Section

Lauren Rutter

Doctorate in Clinical Psychology

Division of Health Research, Lancaster University

Ethics Section

1. Research and Development Proposal Pro-forma



North West Ambulance Service **NHS** NHS Trust Research and Development Proposal Pro-forma

This form must be completed for all research studies within or by the Trust. The proposal needs to be approved by the Research and Development Steering Group. Please contact the Senior Clinical Quality Manager / Clinical Quality Manager at Trust Headquarters should you require any assistance in completing the form or any other queries.

Name of proposer / principal investigator		Lauren Rutter	
Job Title		Trainee Clinical Psychologist	
Directorate (Internal Only)			
Contact Details	Email:	l.rutter@lancaster.ac.uk	
	Phone:	07527818642	
Trust /Institution* (For use by External Organisations)		Lancaster University	
Date of proposal submission			
Proposed study start date		January 2018	
Proposed study finish date		May 2018	
Expected date of final report		May 2018	
What type of study is this part of:		Define reason for study:	
Post-Doctoral Study		Research	<input checked="" type="checkbox"/>
Phd		Service Evaluation	
Msc		Service Development	
Bsc		Other (Please Specify)	Doctorate in Clinical Psychology

Trust Patient Care Strategy Key Principles (Please tick those which apply) INTERNAL ONLY	
Health Prevention & promotion – (Before the call)	
Contact Centres enhanced clinical support – (Answer my call)	
Appropriate bespoke response is received – (Understand my needs)	
Use resources effectively and responsibly – (Respond to my need(s))	
Ensure the right outcome is achieved – (Direct me to the right place)	

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CLEAR (Please tick those which apply to your Project) – INTERNAL ONLY	
Clinical and Systems Leadership	
Education, Innovation and Clinical Practice Development	
Accountability for QI and Assurance	
Responsibility to Collaborate and Improve	

Title of Research Study
Ambulance clinicians’ experience of psychological trauma: An Interpretative Phenomenological Study
Background (Why do you want to undertake the research – what has prompted this study?)
<p>Emergency workers are exposed to events involving human pain and suffering daily, and their routine work may make them more vulnerable to developing post-traumatic stress symptomatology (Beaton & Murphey, 1995; Durham, McCammon & Alision, 1986). The occupational routine for emergency services can include the provision of emergency medical assistance to severely injured individuals, searching for and recovering individuals from wreckages and firefighting. Although for the most part emergency workers are equipped to deal with these events, on occasion one event will have a lasting effect. Post-Traumatic Stress Disorder (PTSD) is the long-term outcome that has been most studied in ambulance workers. They exhibit an increased prevalence compared to community samples (Stein, Walker, Hazen & Forde, 1997; Sterud, Ekeberg & Hem, 2006).</p> <p>Vicarious trauma refers to the impact of a traumatic incident on people other than the immediate victim but in some way bear witness to the event; a role typical for ambulance officers (Figley, 1995; Mitchell & Everly, 2001; Saakvitne & Pearlman, 1996). There is evidence to suggest that incidents often become potentially traumatic because of a blend of workplace factors (Alexander & Klein, 2001; van der Ploeg & Kleber, 2003) and qualities of the incident itself (Bryant & Harvey, 1996; Clohessy & Ehlers, 1999; van der Ploeg & Kleber, 2003).</p> <p>Vicarious trauma has been experienced by ambulance workers when they have developed a sense of what the victim or their families had endured, that is, they had developed empathy for them (Regehr, Goldberg & Hughes, 2002). Earlier research has indicated identification with the victim can be a strong predictor to post-traumatic stress reactions among helpers (Ursano, Fullerton, Vance & Kao, 1999), especially when children are involved (Dyregrov & Mitchell, 1993). When paramedics contextualise the victim in a relationship with another</p>

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person this can make an event potentially traumatic, for example: a child that was abused; an individual who died alone without the support of others; or the grief of a family member. In the process of contextualising the individual, the paramedic develops an emotional connection to the individual or the family members. Feelings of inability to help often co-existent with overwhelming compassion can cause workers to experience intrusive and avoidant PTSD-type symptoms (Halpern, Gurevich, Schwartz & Brazeau, 2009). Additionally, a potentially traumatising event has been described as an encounter with the unforeseen and meaningless (Johnsson & Segestin, 2003).

Common coping strategies used by emergency service personnel, include the use of dark humour, cognitive strategies, social support and the creation of meaning (Moran & Shakespeare-Finch, 2003, Paton & Violanti, 1996). Some coping responses, such as avoidance or dissociation strategies, are typically viewed as maladaptive but may be a successful approach in some critical situations. For example, the professional detachment or emotional distancing reportedly used by many paramedics at the time of a response to a critical incident (Figely, 2008). This can involve pretending the event is not real to distance themselves from intrusive feelings. However, the strategy of professional detachment or emotional distancing can result in difficulty for the worker as it can often not be easy to shift to emotional openness in significant relationships. Isolation and drugs and alcohol, are also used to try and cope with vulnerable feelings (Mind, 2015).

Research has shown that, as in other emergency services, ambulance personnel work hard to prevent their mental health affecting their performance, but this can come at a large cost (including relationship breakdown and effects on physical health; Mind, 2015); with 43% of emergency services personnel having taken time of work to deal with mental health difficulties (Mind, 2014). There is a societal perception that ambulance personnel are capable of functioning efficiently in highly stressful situations without being emotionally shaken by the difficult scenes and situations involved in their work (Jonsson & Segesten, 2004); paramedics have similar expectations about themselves. When paramedics encounter an event that can make them feel vulnerable, hampering their ability to function at the event, it can lead to difficulty containing this sense of vulnerability (Avraham, Goldblatt & Yafe, 2014; Miller, 1995). This may be due to it being incongruent with their professional self-expectations, leading to a threat to professional identity and self-image. Miller (1995) coined the expression “tough guys” to characterise the professional identity of emergency responders, including paramedics. These characteristics included adaptation ability, defensive toughness of attitudes, as well as determination, which are essential for effective functioning in such events. Difficulties in recognising and admitting to distress might pose significant difficulties in accessing support and they may fear the stigma that might result from revealing it to others (Halpern, Gurevich, Schartz & Brazeau, 2009).

As ambulance clinicians are exposed to potentially traumatic experiences as part of routine aspects of their job it is paramount to further try to understand ambulance clinicians’

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individual and subjective experiences of a traumatic experience with an aim to make recommendations to further training and support.
Aim of the Study (What are you trying to achieve, your expectations?)
To try and gain an understanding of ambulance clinicians experiences of psychological trauma as a consequence of their professional role.
Objectives (what aspects of care or practice are to be examined?)
The main research question is as follows: What are ambulance clinicians’ experiences of psychological trauma? This question will be addressed through three secondary questions: How do ambulance clinicians make sense of the link between exposure to traumatic experiences and their own psychological difficulties? What is the impact of experiencing psychological trauma on the work and personal lives of ambulance clinicians? What are ambulance clinicians’ coping mechanisms to manage psychological difficulties as part of their role?

Study Plan: How do you propose to collect the data?
Semi-structured interviews will be conducted individually and last up to one hour. Interviews will be offered at the ambulance base, in a neutral venue, at participants’ homes or via telephone or skype to ensure participants are comfortable with where the interviews are taking place. A topic guide will be developed to act as a guide for the interview and ensure that certain topics are addressed. Due to the qualitative design of the study, follow-up questions will be asked based on the responses provided by the participants. The researcher will transcribe the audio-recorded interviews. Descriptive statistics will be provided by participants to offer an overview of the population presented by the sample. These will include data relating to characteristics such as age, gender, job role and length of service.
Sample size (indicate how this was calculated and whether any advice was sought in calculating it?)
The design of this study will be qualitative. It will involve one to one interviews with a small sample of participants (8-12) as this is deemed to be an acceptable number using this method.
Method of analysis
An in-depth method of analysis (Interpretative Phenomenological Analysis (IPA), Smith et al., 1996) which allows participants’ individual experiences to be explored in detail, will be used. Qualitative methodology is deemed the most appropriate for eliciting participants’ unique experiences. Participants’ will be asked to take part in an individual semi-structured interview.

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Interviews will be transcribed and analysed using IPA. Semi-structured interviews will be conducted individually and last up to one hour. A topic guide will be developed to act as a guide for the interview and ensure that certain topics are addressed. Due to the qualitative design of the study, follow-up questions will be asked based on the responses provided by the participants. Interviews will be audio recorded and transcribed by the researcher.

Who is going to collect the data?

The main researcher (Lauren Rutter) will carry out the one-to-one interviews

Timescale (to collect the data, to analyse the data?)

January – February 2018 – Collect data

January – March 2018 – Data analysis

Details of costs/resource implications (if applicable)

The potential costs (photocopies of consent forms etc and travel) will be covered by Lancaster University.

Please confirm that you have attached the following documents: (Delete as appropriate)

	Yes	No
Background research undertaken (i.e. Literature review)	Yes	No
Information about patient involvement in the study (in the study design)	Yes	No
Arrangements for obtaining informed consent & identifying participants	Yes	No
Questionnaires or surveys to be used	Yes	No
Risk assessment	Yes	No
Strategy for dissemination	Yes	No

Ethical Status: Please confirm the stage that the NRES application of the study is at:

Ethical approval Required	Yes	No
If Yes please confirm at what stage the NRES Application of the study is currently at:		

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Please confirm that you are familiar with: (Delete as appropriate)		
The Data Protection Act and other legal provisions/guidance	Yes	
The Incident Reporting Process	Yes	
The Trust Clinical Audit Policy	Yes	

Note: The proposal form is to inform the approval process.

- You will be notified in writing of the approval decision.
- Research outcomes will be reported to the Board through the Clinical Governance Management Group and may be used in the Trust Annual Report.
- All findings and intellectual property rights will belong to the Trust under the terms of the employment contract.
- The Trust reserves the right to at no cost reproduce and use any findings for its own non-commercial purposes.

For Internal Use only by R&D Team						
Has all the required documentation been submitted?					Yes	No
Sent to RDSG		Yes	No	Sent to Clinical Leadership Group		N/A
				Sent to CGMG		N/A
Date Approved:						
Approval Group name:						
Date Approval letter sent:						

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2. Research Protocol



Thesis Protocol

Ambulance clinicians' experience of psychological trauma: An Interpretative Phenomenological Study

Research Team: Lauren Rutter (Trainee Clinical Psychologist), Dr Suzanne Hodge (Supervisor, Lecturer in Health Research), Dr Will Curvis (Supervisor, Clinical Tutor), [REDACTED] (Field Supervisor, Advanced paramedic)

Introduction

Literature Review

Emergency workers are exposed to events involving human pain and suffering daily, and their routine work may make them more vulnerable to developing post-traumatic stress symptomatology (Beaton & Murphey, 1995; Durham, Alexander & Klein, 2001). The occupational routine for emergency services can include the provision of emergency medical assistance to severely injured individuals, searching for and recovering individuals from wreckages and firefighting. Although for the most part emergency workers are occupationally equipped to deal with these events, on occasion one event will have a psychological lasting effect. Additionally, exposure to traumatic situations is a routine aspect of their role (Regehr, Goldberg & Hughes, 2002).

Post-Traumatic Stress Disorder (PTSD) is the long-term outcome that has been most studied in ambulance workers. They exhibit an increased prevalence compared to community samples (20% vs. 1-3%; Stein, Walker, Hazen & Forde, 1997; Sterud, Ekeberg & Hem, 2006), likely because of their increased exposure (Marmar et al., 1999). According to the DSM-V (American Psychiatric Association, 2013), PTSD criteria of a traumatic event include involvement in, witnessing, or learning about (the latter in a close associate or family member) actual or threatened death, repeated or extreme indirect exposure to aversive details of the events usually in the course of professional duties (e.g. first responders) and a response of intense fear, horror or helplessness. There is evidence to suggest that incidents often become potentially traumatic because of a blend of workplace factors, such as the recovery time available before having to attend another potentially traumatic incident, (Alexander & Klein, 2001; van der Ploeg & Kleber, 2003) and qualities of the incident itself, such as dealing with a dead or injured child (Bryant & Harvey, 1996; Clohessy & Ehlers, 1999; van der Ploeg & Kleber, 2003). The mental health of emergency responders is an increasing concern. In 2015 Mind launched a Blue Light programme as it was acknowledged that 87% of emergency service workers had experienced stress, low mood and other mental health difficulties at some point in their career. Their research showed that there was a major need for specialist and independent support for mental health in this sector.

Although it may be anticipated that emergency workers will be affected by an event involving mass casualty it is often a smaller and less sensational event that triggers an emotional response and the cumulative impact of repeated involvement with such situations (Halpern, Gurevich, Schwartz & Brazeau, 2009). A term that could help to understand this process is vicarious trauma. Vicarious trauma refers to the impact of a traumatic incident on people other than the immediate victim; a role typical for ambulance officers (Figley, 1995; Mitchell & Everly, 2001; Saakvitne & Pearlman, 1996). Vicarious trauma is a concept that is typically used to describe the experience of mental health workers who develop symptoms of traumatic stress as a consequence of working with traumatised individuals. That is, through the process of hearing the graphic details of other peoples' horrifying experiences the worker can begin to experience symptoms that include intrusive imagery, generalised fears, sleep disturbances, a changed worldview and affective arousal

(Chrestman, 1995; Regehr & Cadell, 1999). This process is thought to occur in part as a result of empathic engagement between the worker and the client (Figley, 1995; Saakvitne & Pearlman, 1996).

Vicarious trauma can be experienced by ambulance workers when they have developed a sense of what the victim or their families had endured, that is, they had developed empathy for them (Regehr, Goldberg & Hughes, 2002). Earlier research has indicated identification with the victim can be a strong predictor to post-traumatic stress reactions among helpers (Ursano, Fullerton, Vance & Kao, 1999), especially when children are involved (Dyregrov & Mitchell, 1993). When paramedics contextualise the victim in a relationship with another person this can make an event potentially traumatic, for example: a child that was abused; an individual who died alone without the support of others; or the grief of a family member. In the process of contextualising the individual, the paramedic develops an emotional connection to the individual or the family members. Feelings of inability to help often co-exist with overwhelming compassion, and can cause workers to experience intrusive and avoidant PTSD-type symptoms (Halpern, Gurevich, Schwartz & Brazeau, 2009). Additionally, a potentially traumatising event has been described as an encounter with the unforeseen and meaningless (Jonsson & Segestin, 2003).

Common coping strategies used by emergency service personnel, include the use of dark humour, cognitive strategies, social support and the creation of meaning (Moran & Shakespeare-Finch, 2003, Paton & Violanti, 1996). Some coping responses, such as avoidance or dissociation strategies, are typically viewed as maladaptive, but may be a successful approach in some critical situations. For example, the professional detachment or emotional distancing reportedly used by many paramedics at the time of a response to a critical incident (Figley, 2008). This can involve pretending the event is not real to distance themselves from intrusive feelings. However, the strategy of professional detachment or emotional distancing can result in difficulty for the worker as it can often not be easy to shift to emotional openness in significant relationships. Isolation and drugs and alcohol, are also used to try and cope with vulnerable feelings (Mind, 2015). It has been reported that support from peers and family members is important to modify feelings of distress in ambulance workers (Avraham, Goldblatt & Yafe, 2014). Formal organisational support services, such as seeing a psychologist has also been described as important. However, it has been noted that these formal support systems are often only triggered by large-scale incidents (Regehr, Goldberg & Hughes, 2002) and is not always possible to anticipate when traumatic events experienced as a routine part of the role will impact paramedics, meaning that pathways to occupational health support services are often not triggered.

Research has shown that, as in other emergency services, ambulance personnel work hard to prevent their mental health affecting their performance, but this can come at a large cost (including relationship breakdown and effects on physical health; Mind, 2015). Additionally, 43% of emergency services personnel have taken time of work to deal with mental health difficulties (Mind, 2014) and it has been reported that ambulance trusts have the highest sickness rates in the NHS (Department of Health; DOH, 2004). There is a societal perception that ambulance personnel are capable of functioning efficiently in highly stressful situations without being emotionally shaken by the difficult scenes and situations involved in their work (Jonsson & Segesten, 2004); ambulance clinicians have similar expectations about themselves. When ambulance clinicians encounter an event that can make them feel vulnerable, hampering their ability to function at the event, it can lead to difficulty containing this sense of vulnerability (Avraham, Goldblatt & Yafe, 2014; Miller, 1995). This may be due to it being incongruent with their professional self-expectations, leading to a threat to professional identity and self-image. Miller (1995) coined the expression "tough guys" to

characterise the professional identity of emergency responders, including paramedics. These characteristics included adaptation ability, defensive toughness of attitudes, as well as determination, which are essential for effective functioning in such events. Difficulties in recognising and admitting to distress might pose significant difficulties in accessing support and they may fear the stigma that might result from revealing it to others (Halpern, Gurevich, Schartz & Brazeau, 2009).

The organisational context to achieve nationally set performance targets has further increased the work pressure of front line healthcare workers including paramedics (Adomat & Killingworth, 1994). It has been described that response time targets can have a profound impact on paramedics' health, safety and well-being (Price, 2006). For example, the changes to skill mix and roles have led to the introduction of single manned rapid response vehicles and the use of 'standby points', all of which have eroded informal team support and opportunities for immediate feedback and debriefing from peers (DOH, 2011). Nevertheless, paramedics' experiences of psychological trauma resulting from their role has been scarcely studied to date.

As ambulance clinicians are exposed to potentially traumatic experiences as part of routine aspects of their job, it is paramount to understand ambulance clinicians' individual and subjective experiences of psychological trauma to attempt to inform future training and support, with the aim of improving the wellbeing of the workforce. Therefore, the main research question is as follows: What are ambulance clinicians' experiences of psychological trauma? This question will be addressed through three secondary questions: How do ambulance clinicians make sense of the link between exposure to traumatic experiences and their own psychological difficulties? What is the impact of experiencing psychological trauma on the work and personal lives of ambulance clinicians? What are ambulance clinicians' coping mechanisms to manage psychological difficulties as part of their role?

Design

As the purpose of this research is to elicit participants' experiences of trauma, a qualitative method is deemed most appropriate. It will involve one to one interviews with a small sample of participants (8-12) and an in-depth method of analysis (Interpretative Phenomenological Analysis (IPA), Smith et al., 1996) which allows participants' individual experiences to be explored in detail. IPA is concerned with sense-making of people who share similar experiences (Smith, Flowers & Larkin, 2009). As this study aims to explore ambulance clinicians' subjective experiences, IPA would be an appropriate approach to explore each participant's understanding of their experiences. Participants will be asked to take part in an individual semi-structured interview. Interviews will be transcribed and analysed using IPA. Semi-structured interviews will be conducted individually and last up to one hour. A topic guide will be developed to act as a guide for the interview and ensure that certain topics are addressed. Due to the qualitative design of the study, follow-up questions will be asked based on the responses provided by the participants. Interviews will be audio recorded and transcribed by the researcher. A record of the process of the analysis will be kept and referenced in the final report.

Participants

Participants will be 8-12 ambulance clinicians. IPA is argued to be more suitable for small samples due to the time-intensive nature of IPA and so the richness of individual accounts can be accommodated. Following discussions with an experienced practitioner in the field, it is anticipated that this will be an achievable sample size. It is aimed to recruit ambulance service staff who have experienced psychological trauma as a consequence of their professional role and who may or may

not have received professional psychological or other support because of their experiences of the effects of trauma.

Inclusion Criteria

To be included within the study participants will have to meet the following criteria:

- Currently serving in the ambulance service as paramedics or Emergency Medical Technicians
- Ambulance clinicians who have experienced self-reported psychological trauma-related symptoms as a part of their role, such as: reliving the traumatic event through intrusive memories, flashbacks and nightmares. Also, difficulty sleeping, avoiding reminders of the event and feelings of isolation, irritability and guilt due to the psychological trauma they have experienced. A self-report approach to inclusion is going to be adopted as the study is focusing on paramedics' meaning making of their own personal experiences of psychological trauma.

Materials

A recruitment poster (Appendix A), participant information sheet (Appendix B), A consent form (Appendix C), an interview schedule (Appendix D) and participant debrief sheet (Appendix E).

Recruitment of participants

Participants will be recruited from the [REDACTED] region of the North-west Ambulance service through the field supervisor who is based at the service. The field supervisor will circulate the poster on staff bulletins and the poster will also be circulated via Blue Light champions. Mind (2015) has developed a Blue Light programme to provide mental health support for emergency service staff and volunteers and to actively challenge mental health stigma, learn more about mental health and make positive changes in their approach to well-being. A Blue Light Champion is an employee or volunteer in the emergency services, who takes action in the workplace to raise awareness of mental health problems and challenge mental health stigma (Mind, 2015). Through the aforementioned networks, potential participants will have access to a recruitment poster from staff bulletins or receive a poster via email from Blue Light Champions which outlines the main researchers contact details and asks potential participants to contact the main researcher if they have an interest in participating in this study. If participants are happy to proceed a mutually convenient time will be set up to carry out the interview. Interviews will be offered at the ambulance base, in a neutral venue, at participants' homes or via telephone or via video conferencing software (Lancaster University's WebEx) to ensure participants are comfortable with where the interviews are taking place. The researcher will discuss the purpose of the research and answer any questions or concerns prior to the participants giving their written consent. Consent will be given prior to the interviews. Recruitment will stop if twelve people are recruited to the study. If not enough participants can be recruited from this area then recruitment will be expanded to the wider areas. Additionally, posters in ambulance stations could be put up to aid with recruitment. If following this not enough response has been achieved, recruitment could be broadened out from the [REDACTED] areas to the wider geographical area with relevant managerial approval being sought. If following this not enough response has been achieved, recruitment could be broadened out from the North West Ambulance Service to other geographical areas with the relevant ethical approval being sought.

Gaining Informed Consent

Written consent will be obtained from the participants at the time of meeting the researcher for the interview (Appendix C). When participants have opted to have the interview via telephone or video conferencing software they will be emailed the consent form and will be asked to have emailed the completed form prior to the interview. Participants will be given the opportunity to ask questions prior to and directly before the interview. The researcher will establish that the participant is aware that the interview will be audio recorded and that whilst the data will be anonymous, quotes may be included in the final report with pseudonyms used, and any published articles about the study. Furthermore, the researcher will ensure that the participant is aware of their right to withdraw at any point before, after or during participation, until two weeks after their interview has passed. The researcher will check with the participant whether they want to continue with participation, and if they express their wish to do so, they will be asked to provide written consent.

Semi-structured interview

Semi-structured interviews will be conducted individually and last up to one hour. An interview schedule has been developed (Appendix D) to act as a guide for the interview. This will consist of broad questions and be used to facilitate discussion. The interview will aim to outline the area of interest and allow for further questions to be asked. Interviews will be audio recorded on a dictaphone and saved on the Lancaster University server. Interviews will be transcribed and also saved electronically on the Lancaster University server. If participants request that the interview be stopped this will be respected. Participants will be debriefed following the interview and provided with a debriefing form (Appendix E).

Proposed Analysis

The researcher will transcribe the audio-recorded interviews. Transcripts will then be analysed using IPA. IPA focuses on exploring people's lived experiences and the meanings people attach to those experiences; as the current study will be looking at how participants' make sense of their experience of psychological trauma, IPA will be particularly suitable. The process of IPA will follow the guidance developed by Smith, Flowers & Larkin, (2009). Each transcript will be annotated, identifying anything of note in the transcript, and emergent themes developed from these annotations, before a small set of superordinate themes is developed from the emergent themes. After this is done for each transcript, the final stage is to work from the individual analyses of each transcript to develop a set of final themes for the whole set of transcripts.

One of the research supervisors (Suzanne Hodge) will listen to at least one of the audio recordings to provide guidance on the interview process. In addition, both research supervisors (Suzanne Hodge and Will Curvis) will have access to the transcriptions to advise the researcher and to ensure the emerging themes are reflective of the data. The emerging themes will be discussed with the research supervisors to inform interpretation of the data and the write up of the final report. The researcher has experience of conducting interviews covering sensitive topics in a number of clinical services. Demographic information including gender, age, job role and length of service will be included to provide an overview of the demographic data presented by the sample.

Practical issues

Rooms for interviews will be booked prior to the interviews taking place. The interviews will be offered to take place at the ambulance station, neutral venues (e.g. at Lancaster University), participants' homes and via telephone and skype to ensure participants are comfortable where the

interviews are taking place. Materials required for the study (photocopies, recording and transcribing) will be provided by Lancaster University.

Ethical Concerns

Gaining ethical approval

This study involves participants who are employees of the North-West Ambulance Service and therefore requires University FHMREC approval and Research and Governance approval from the North-West Ambulance service.

Potential to cause distress

It is recognised that asking questions relating to a traumatic experience may elicit some upsetting thoughts or memories for the participants. Before beginning the interview it will be made clear to participants again that the interview will be asking about their experiences of psychological trauma and they will be asked if they want to continue participating in the study. It will be made clear that they can pause the interview and take a break if needs be, or stop the interview completely. If during the interview the researcher thinks that that the participant is demonstrating any signs of distress, then the interview will be paused and the participant will be asked if they would like to take a break or terminate the interview completely. Participants will be provided with information of the support provided within the ambulance service such as occupational health to access in-house counselling and senior clinical leadership team. Participants will also be encouraged to contact their GP who can discuss psychological support with them via NHS routes. Contact details for Mind and Mind Bluelight programme will also be provided. Participants will be debriefed following the interview. This will include questions such as 'how do you feel?' 'how did you find the interview?' these questions will be asked with the intention to ground the participants in the 'here and now' following the interview. Participants will also be provided with a debrief sheet which will acknowledge that talking about trauma may elicit strong feelings and distress and will provide resources for additional support (Appendix E). Participants will be able to withdraw their data 14 days following their interview, after which time their data will be pooled and unable to be extracted. It is acknowledged that due to the nature of the topic of the interviews the researcher may find them distressing. The researcher will be able to access additional supervisory support from the researcher supervisors and from their clinical tutor on the DClinPsy programme.

Risk

As participants are professionals it is expected that there will be minimal risk to the research team. All contact details provided will be official work email addresses and telephone numbers to ensure all contact made with participants during the study will be in a professional capacity. I will be lone working with participants during the interviews. The Lancashire Care NHS foundation trust Lone Worker policy will be followed. When carrying out the interviews at an ambulance station or at neutral venues, rooms will be booked through staff members and staff will be aware when I start and finish the interview. If interviews are carried out in participants' homes, a buddy system will be operated, from which a nominated buddy (research supervisor or if they are not available an allocated trainee clinical psychologist on the DClinPsy course) will be aware of my movements and appointments i.e. when and where the interviews are being carried out and I will inform them when they are finished. Information about my whereabouts will be given to my 'buddy' in a sealed envelope, to be opened only in the event of the researcher not being contactable to protect the confidentiality of the research participants. In the event where the researcher does not contact the 'buddy' within agreed and reasonable timescales then attempts will be made to make contact with

the researcher and if following this contact cannot be made then the course clinical director/or equivalent on that day and next of kin will be notified. If there is a serious concern then police will be notified. If serious risk issues, towards themselves or others, is disclosed during the interview that the researcher thinks are a cause for concern then the field supervisor will be informed, where possible this will be done in collaboration with the participant.

Data Management Plan

Participants will be allocated a numerical ID, which will be kept separate from the participant consent forms to ensure anonymity. The numerical ID's will be allocated to the participant's data. Consent forms will be retained; however, the paper copies will be destroyed by the researcher as soon as possible after they have been scanned and saved as electronic copies on the Lancaster University server. Participants' will be asked if they would like a summary of the research findings and if they do the researcher will forward this on to them as the participants will be given the researchers email address to state that they would be interested to participate in the study. If any participant requests a summary of the research findings the field supervisor will be informed so a summary can be forwarded on to that individual from the service. In line with the Data Protection Act (TSO, 1998) and Information Governance requirement, all electronic consent forms, transcripts and audio recordings will be transferred and stored onto the Lancaster University server. If the researcher is not on University grounds this will be done via the Virtual Private Network (VPN). Files will be password protected as an additional security measure.

Time Scale

October 2017– Submit proposal
November 2017 – Submit ethics
October 2017- December 2018 – Systematic Literature Review
January/February 2018 – Data Collection
January/March 2018 – Data Analysis
March-May 2018 – Research paper
May 2018 – Submit Thesis

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Appendix A. Recruitment poster



Ambulance clinicians' experience of psychological trauma

What is the project about?

My name is Lauren Rutter and I am a trainee clinical psychologist at Lancaster University. As part of my course I am doing a research project exploring the experiences of ambulance clinicians who have experienced psychological trauma as a consequence of their role. The work of ambulance clinicians involves frequent exposure to trauma, both direct and indirect. Psychological trauma can involve trauma-related responses that can be caused by very stressful, frightening or distressing events. Trauma-related responses can include:

- Reliving the event through intrusive memories, flashbacks and nightmares;
- Avoiding reminders of the event (including thoughts);
- Having more negative beliefs and feelings (guilt, shame, feel numb, find it hard to feel happy, might feel the world is dangerous and can't trust anyone);
- Hyperarousal (e.g. hypervigilance, difficulty sleeping or concentrating, irritable or aggressive behaviour)

Who can take part?

I am looking for people actively working in the ambulance service as a paramedic or an emergency medical technician who have experienced trauma-related responses, such as those listed above, as a consequence of their role. You may have received counselling or other psychological support because of these experiences, or you may have experienced some of these symptoms and managed them by yourself. You can take part whether or not you have received professional help for the trauma.

What is involved?

You will be asked to take part in an interview lasting about one hour. In the interview, you will be asked about your experiences of trauma and how these have affected you at work and personally, and about how you have coped. This will be anonymous.

Interested?

If you would like to participate, would like more information or unsure about whether you could take part in this study, please contact: **Lauren Rutter: l.rutter@lancaster.ac.uk** and a member of the research team will be in contact with you.

Appendix B. Participant information sheet

Participant Information Sheet

Ambulance clinicians' experience of psychological trauma: An Interpretative Phenomenological study

What is the project about?

The work of ambulance clinicians involves frequent exposure to trauma, both direct and indirect. I am interested in finding out about ambulance clinicians' experiences of psychological traumatic experiences as a consequence of their role. This project will be conducted by Lauren Rutter (Trainee Clinical Psychologist), supervised by Dr Suzanne Hodge, Dr Will Curvis and [REDACTED], and will fulfil the requirements of doctoral training in clinical psychology.

Do I have to take part?

No. It's completely up to you to decide whether or not you take part. If you do take part you can change your mind and withdraw your data 14 days after your interview.

What will I be asked to do if I take part?

If you decide you would like to take part, you would be asked to take part in an informal interview lasting about an hour where I will ask you about your experiences of trauma and how it has affected you at work and personally, and about how you have coped. This interview can take place at your work place, in a neutral place, at your home or via phone or video conferencing software. You will be able to pause or stop the interview completely at any time.

Will taking part be confidential?

Whilst every effort will be made, it is not possible to ensure confidentiality of participation when the interview takes place on work premises during the working day.

Will my data be identifiable?

The information you provide will be made anonymous by changing names and taking out any information that could identify you or anyone else. The information you give will be put together with the information from other people who take part, meaning that no one will know who each quote belongs to. Quotes from the interviews will be included in the final report and presentation but these will be anonymised. The data collected for this study will be stored securely and only the researcher and her research supervisors at the University of Lancaster (Suzanne Hodge and Will Curvis) will have access to this data:

- Audio recordings will be destroyed and/or deleted once the project has been submitted for publication/examined
- The files on the computer will be encrypted (that is no-one other than the researcher will be able to access them) and the computer itself password protected.

- The typed version of your interview will be made anonymous by removing any identifying information including your name. Anonymised direct quotations from your interview may be used in the reports or publications from the study, so your name will not be attached to them.
- All your personal data will be confidential and will be kept separately from your interview responses. There are some limits to confidentiality: if what is said in the interview makes me think that you, or someone else, is at significant risk of harm, I will have to break confidentiality and speak to a member of staff about this. If possible, I will tell you if I have to do this.

What will happen to the results?

The results from this project will be summarised and reported as part of my training as a clinical psychologist and will be examined by Lancaster University. The results will be fed back to staff at the North-West Ambulance Service and may be submitted for publication in an academic or professional journal.

Are there any risks?

Talking about trauma you have experienced may be difficult and potentially cause distress. If you experience any distress during or following participation you are encouraged to inform the researcher and contact the resources provided at the end of this sheet.

Are there any benefits to taking part?

Although you may find participating interesting, there are no direct benefits in taking part. However, this research may inform future training and support for ambulance clinicians.

Who has reviewed the project?

This study has been reviewed and approved by the Faculty of Health and Medicine Research Ethics Committee at Lancaster University and the North-West Ambulance Research and Development Governance board.

Where can I obtain further information about the study if I need it?

If you have any questions about the study, please contact the main researcher: Lauren Rutter (l.rutter@lancaster.ac.uk), field supervisor [REDACTED] ([REDACTED]@nwas.nhs.uk) or my research supervisors (s.hodge@lancaster.ac.uk/w.curvis@lancaster.ac.uk) and we will be happy to answer any questions.

Complaints

If you wish to make a complaint or raise concerns about any aspect of this study and do not want to speak to the researcher, you can contact:

Bill Sellwood
Lecturer in Health Research
Tel: (01524) 593998
Email: b.sellwood@lancaster.ac.uk
Faculty of Health and Medicine
Lancaster University



Lancaster
LA1 4YG

If you wish to speak to someone outside of the Clinical Psychology Doctorate Programme, you may also contact:

Professor Roger Pickup
Associate Dean for Research
Tel: +44 (0)1524 593746
Email: r.pickup@lancaster.ac.uk
Faculty of Health and Medicine
(Division of Biomedical and Life Sciences)
Lancaster University
Lancaster LA1 4YG

Thank you for taking the time to read this information sheet.

Resources in the event of distress

Should you feel distressed either as a result of taking part, or in the future, the following resources may be of assistance:

Work Resources

- Line manager – Senior Paramedic Team Leader (SPT/L), Advanced paramedic, Operational Manager or Sector Manager.
- Trauma Risk Management (TRiM) assessors available across the trust. General email: MBTRiM.request@nwas.nhs.uk
- Occupational health department to access professional counselling services. This can be accessed via the intranet page
- Mind Blue Light Champions. A Blue Light Champion is an employee or volunteer in the emergency services, who takes action in the workplace to raise awareness of mental health problems and challenge mental health stigma (Mind, 2015). General email: Mind.Bluelight@nwas.nhs.uk

Out-of-work resources

- Your GP who can discuss psychological support via NHS routes or pastoral care
- Mind (www.mind.org.uk)



- The Mind blue light programme (www.mind.org.uk/news--campaigns/campaigns/bluelight/; Infoline Call: 0300 303 5999; Text: 84999; email: bluelightinfo@mind.org.uk)



Appendix C. Consent form

Participant ID Number: CONSENT FORM

Title of Project: Ambulance clinicians’ experience of psychological trauma: An Interpretative Phenomenological Study

We are asking if you would like to take part in a research project looking ambulance clinicians’ experiences of psychological trauma. Before you consent to participating in the study we ask that you read the participant information sheet and tick each box below if you agree. If you have any questions or queries before signing the consent form please ask the researcher, Lauren Rutter

- 1. I confirm that I have read the information sheet and fully understand what is expected of me within this study
- 2. I confirm that I have had the opportunity to ask any questions and to have them answered.
- 3. I understand that my interview will be audio recorded and then made into an anonymised written transcript.
- 4. I understand that audio recordings will be kept until the research project has been examined.
- 5. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason
- 6. I understand that I can withdraw my data from the study up to two weeks after my interview, after this point my data will be integrated with data from other participants
- 7. I understand that the information from my interview will be pooled with other participants’ responses, anonymised and may be published
- 8. I consent to information and quotations from my interview being used in reports, conferences and training events.
- 9. I understand that any information I give will remain strictly confidential and anonymous unless it is thought that there is a risk of harm to myself or others, in which case the researcher will need to share this information with her research supervisor.
- 10. I consent to Lancaster University keeping written transcriptions of the interview for 10 years after the study has finished.
- 11. I consent to take part in the above study.

Participant:.....

Signature:.....

Researcher:.....

Signature:.....



Date:

Appendix D. Interview guide

Interview GuideExperiences of trauma

- Is there are particular traumatic event that you were thinking of when agreeing to participate in this study? Could you briefly describe what this is?
- Or what were the experiences that led you to participating in this study?
- What do you think it was about this event/experiences that had an effect on you? What struck you personally?
- What can you remember thinking, feeling, seeing at the event?
- How did you cope with this at the time?

Aftermath

- What happened after the event? What were you thinking, feeling then?
- Did you feel prepared for the event?
- How did you cope with this following the event?
- Do you use any coping mechanisms to help you cope?
- Do you utilise any sources of support at work or at home to help cope?

Personal experience personally

- Has the trauma made a difference to you as a person?
- What did the trauma mean to you?
- Has it affected you emotionally/psychologically?
- Are there any longer-term impacts of the trauma? How have those affected you?

Personal experience professionally

- Has the trauma made a difference to you professionally?
- Impacted on your perceptions about support available?

Appendix E. Participant debriefing form

Participant Debriefing Form

Title of project: Ambulance clinicians' experiences of psychological trauma: An Interpretative Phenomenological Study

Name of Researcher: Lauren Rutter

Thank you for taking part in this study.

This study was exploring ambulance clinicians' experience of psychological trauma, as a consequence of their professional role. The purpose of this was to explore individual experiences of trauma in detail and to attempt to understand what makes an event traumatic for ambulance clinicians.

I would like to take this opportunity to thank you for participating in this study. We recognise that talking about trauma you have experienced may be difficult and potentially cause distress. If you experienced any distress during or following participation you are encouraged to contact the resources provided at the end of this sheet.

The interview will now be typed up by me. Once I have done this for all the people I interview, I will identify and summarise what you have talked about so we can see what it is like for ambulance clinicians to experience psychological trauma. The common themes will be written into a report which could help inform future training and support.

The recording and the typed transcript of your interview will be stored securely on the University computer server.

You have the right to withdraw from this study for 14 days. If you decide that you do not want to be part of this study then I will destroy the audio recording, transcript and any information provided by you.

You will be able to request a summary of these findings by contacting the researcher (l.rutter@lancaster.ac.uk)

If you have any further questions, you can discuss this with the researcher (l.rutter@lancaster.ac.uk) or [REDACTED] ([REDACTED]@nwas.nhs.uk).

If you have any concerns about this research, then you can contact [REDACTED] ([REDACTED]@nwas.nhs.uk) or Dr Suzanne Hodge (s.hodge@lancaster.ac.uk)/Dr Will Curvis (w.curvis@lancaster.ac.uk).

THANK YOU AGAIN FOR YOUR PARTICIPATION

Resources in the event of distress

Should you feel distressed either as a result of taking part, or in the future, the following resources may be of assistance:

Work Resources

- Line manager – Senior Paramedic Team Leader (SPT/L), Advanced paramedic, Operational Manager or Sector Manager.



- Trauma Risk Management (TRiM) assessors available across the trust. General email: MBTRiM.request@nwas.nhs.uk
- Occupational health department to access professional counselling services. This can be accessed via the intranet page
- Mind Blue Light Champions. A Blue Light Champion is an employee or volunteer in the emergency services, who takes action in the workplace to raise awareness of mental health problems and challenge mental health stigma (Mind, 2015). General email: Mind.Bluelight@nwas.nhs.uk

Out-of-work resources

- Your GP who can discuss psychological support via NHS routes or pastoral care
- Mind (www.mind.org.uk)
- The Mind blue light programme (www.mind.org.uk/news--campaigns/campaigns/bluelight/; Infoline Call: 0300 303 5999; Text: 84999; email: bluelightinfo@mind.org.uk)

3. Ethical Approval



Applicant: Lauren Rutter
Supervisor: Suzanne Hodge
Department: Health Research
FHMREC Reference: FHMREC17044

29 January 2018

Dear Lauren

Re: Ambulance Clinicians' experience of psychological trauma: An Interpretative Phenomenological Study.

Thank you for submitting your research ethics application for the above project for review by the **Faculty of Health and Medicine Research Ethics Committee (FHMREC)**. The application was recommended for approval by FHMREC, and on behalf of the Chair of the Committee, I can confirm that approval has been granted for this research project.

This approval is given with the caveat that you seek clarification from the HRA regarding the need for HRA approval, and take any action required by them.

As principal investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licenses and approvals have been obtained;
- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer at the email address below (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress);
- submitting details of proposed substantive amendments to the protocol to the Research Ethics Officer for approval.

Please contact me if you have any queries or require further information.

Tel:- 01542 592838

Email:- fhmresearchsupport@lancaster.ac.uk

Yours sincerely,

A handwritten signature in black ink that reads "Diane Hopkins".

Dr Diane Hopkins
Research Integrity and Governance Officer, Secretary to FHMREC.

4. Research and Development Approval Letter

Our services:
Emergency and urgent care
Non-emergency patient transport
NHS 111

NHS
North West
Ambulance Service
NHS Trust



Lauren Rutter
Trainee Clinical Psychologist

Headquarters
Ladybridge Hall
399 Chorley New Road
Heaton, Bolton
BL1 5DD

07 February 2018

Tel: 01204 498400
www.nwas.nhs.uk

Dear Lauren

AMBULANCE CLINICIANS' EXPERIENCE OF PSYCHOLOGICAL TRAUMA: AN INTERPRETATIVE PHENOMENOLOGICAL STUDY

Thank you for approaching Nwas NHS Trust with regard to your study, and for completing the Trust R&D Proposal pro-forma.

I am pleased to advise you following phase 2 review by the Clinical Leadership Group a decision has been made to formally approve and adopt your study into the Nwas current R&D portfolio **as it meets the requirements to be considered as research.**

The following addition needs to be taken into consideration:

- Signposting psychological support during consent (Nwas Counselling, Clinical Leadership Team, GP, Mind etc.)

Please ensure that you have made yourself familiar with the Nwas R&D Framework requirements; the framework can be located on Nwas intranet or I can forward a copy on to you should you require.

Your project has been assigned the following unique number and this should be indicated on all correspondence with regard to your study: **NWAS 2017_2018 177.**

The next step is for you to provide update reports, so that the Clinical Leadership Group and other sub-committees can be informed of your projects progress.

I take this opportunity to wish you well with your study, and do not hesitate to contact me should you require any further assistance with the Nwas R&D Framework process.

Kind Regards,

pp **CLARE BRADLEY**
Clinical Quality Officer

DAVID RATCLIFFE
Medical Director, R&D Lead

Headquarters: Ladybridge Hall, 399 Chorley New Road, Bolton, BL1 5DD

Chairman: Wyn Dignan

Chief Executive: Derek Cartwright QAM



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