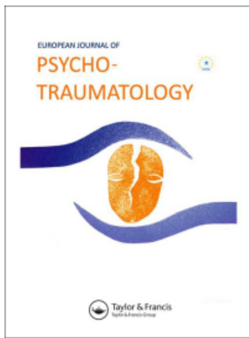

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European Journal of Psychotraumatology

ISSN: 2000-8066 (Online) Journal homepage: www.tandfonline.com/journals/zept20

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To cite this article: Verity Bell, Esther Murray, Luna Muñoz & Charlotte Krahé (2025) In harm's way: moral injury and the erosion of trust for emergency responders in the United Kingdom, European Journal of Psychotraumatology, 16:1, 2513107, DOI: 10.1080/20008066.2025.2513107

To link to this article: https://doi.org/10.1080/20008066.2025.2513107

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EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY
2025, VOL. 16, NO. 1, 2513107
https://doi.org/10.1080/20008066.2025.2513107

EUROPEAN JOURNAL OF PSYCHO-TRAUMATOLOGY
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BASIC RESEARCH ARTICLE

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In harm's way: moral injury and the erosion of trust for emergency responders in the United Kingdom

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ABSTRACT

Background: Moral injury describes the impact of witnessing or being part of events that violate one's values. Initially described in relation to conflict and war, recent work shows that moral injury is a relevant concept for professionals working in emergency situations. Emergency responders work in contexts of human suffering and make complex decisions in time-pressured, high-stakes situations, but emergency responders' viewpoints regarding moral injury and how strongly they align with different viewpoints is currently not well understood.
Objective: We sought to investigate how moral injury is conceptualised and how emergency responders in the United Kingdom (UK) relate to experiences of moral injury.
Method: In this Q-methodology (mixed-methods) study, seven experts co-created a set of 45 opinion statements (Q-set) capturing different facets of moral injury in the context of emergency responding. Subsequently, $N = 21$ emergency responders (police, fire service, emergency medicine, ambulance, and community first-response staff) completed an online Q-sort task, sorting statements according to how much they identified with them.
Results: A by-person factor analysis yielded a three-factor solution mapping onto theoretical positions of moral injury, including loss of trust in others (Factor 1), loss of trust in oneself (Factor 2), and loss of trust in authority (Factor 3).
Conclusions: Our findings support the assumption that moral injury is not a unitary concept but instead comprises different facets that people may identify with to a greater or lesser extent, depending on their role. Our results suggest differences between police vs. hospital ward workers and length of time in the profession. Future research into tailored relational and systemic interventions may be required to address the variety of experiences of moral injury in emergency responders.

En la línea de peligro: daño moral y erosión de la confianza en personal de emergencia del Reino Unido

Introducción El daño moral hace alusión al impacto de ser testigo o de ser parte de eventos que vulneran los valores propios. Inicialmente descrita en el contexto de conflictos y guerras, investigaciones recientes demuestran que el daño moral es un concepto importante para profesionales que trabajan en situaciones de emergencia. Los equipos de emergencia trabajan en el contexto del sufrimiento humano y toman decisiones complejas con consecuencias críticas y bajo la presión del tiempo; sin embargo, en la actualidad, no se comprenden bien los puntos de vista de los socorristas respecto al daño moral y cómo esto se alinea con sus diferentes perspectivas.
Objetivos: Investigar la conceptualización del daño moral y cómo el personal de emergencia del Reino Unido (RU) la experimenta.
Métodos: En este estudio de metodología Q (métodos mixtos), 7 expertos elaboraron un conjunto de 45 enunciados de opinión (conjunto Q), abarcando las diferentes facetas del daño moral en el contexto de la respuesta frente a emergencias. Posteriormente, $N = 21$ profesionales de emergencia (de la policía, cuerpo de bomberos, medicina de emergencias, de ambulancias y personal comunitario de primera línea) completaron una tarea de ordenamiento Q en línea, ordenando los enunciados según el grado en el que se sentían representados por estos.
Resultados: El análisis factorial por persona encontró una solución de tres factores que se alinean con las posturas teóricas del daño moral, incluyendo la pérdida de la confianza en los demás (factor 1), la pérdida de la confianza en uno mismo (factor 2) y la pérdida de la confianza en la autoridad (factor 3).
Conclusiones: Los hallazgos sustentan la presunción que el daño moral no es un concepto unitario, sino que se compone de diferentes aspectos con los cuales las personas pueden identificarse, en

ARTICLE HISTORY
Received 11 March 2025
Revised 22 May 2025
Accepted 22 May 2025

KEYWORDS
Moral injury; emergency responders; fire; ambulance; police; occupational wellbeing

PALABRAS CLAVE
Daño moral; personal de emergencia; fuego; ambulancia; policía; bienestar ocupacional

HIGHLIGHTS

- Using Q methodology, we investigated how moral injury is conceptualised by emergency responders in the United Kingdom (UK).
- Emergency responders (police, fire service, emergency medicine, ambulance, and community first-response staff) completed an online Q-sort task, sorting statements according to how much they identified with them.
- We found three distinct viewpoints mapping onto theoretical positions of moral injury, including loss of trust in others (Factor 1), loss of trust in oneself (Factor 2), and loss of trust in authority (Factor 3).

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Supplemental data for this article can be accessed online at https://doi.org/10.1080/20008066.2025.2513107

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mayor o menor medida, dependiendo del papel que desempeñan. Los resultados sugieren diferencias entre la policía y los trabajadores que realizan guardias en los hospitales, además de diferencias de acuerdo al tiempo dedicado a la profesión. Se requiere mayor investigación para el desarrollo de intervenciones relacionales y sistémicas adaptadas a contextos específicos para abordar la variedad de experiencias de daño moral en el personal de emergencia.

1. Introduction

Moral injury is a biopsychosocial concept that describes the impact on human beings when they witness, or are part of, something that violates their values (Shay, 2014). The experience of doing something or going along with something that goes against one's moral code is associated with internalising emotions, such as shame and guilt, while observing the moral transgressions of others is more likely to be associated with externalising emotions such as anger (Litz & Kerig, 2019). Events that can cause moral distress (a feeling of psychological unease) and – if that unease is sustained – lead to moral injury (see British Medical Association, 2021, for the relationship between moral distress and moral injury) may also include being exposed to significant inhumanity or suffering. Exposure to such events can leave individuals unable to amalgamate morally wounding experiences with their view of themselves, other people, and the world (Litz et al., 2009). Both internalising and externalising responses to morally injurious events could result from acts of commission, omission, or mistakes (Litz & Kerig, 2019) and result in social isolation, as shame is associated with a desire to hide, and feelings of anger and betrayal can lead to an individual disconnecting from others (Griffin et al., 2019).

While moral injury was initially conceptualised with military veterans (Shay, 2010), there is a growing body of research into moral injury in civilians (e.g. Fani et al., 2021; Zasiekina et al., 2023), including healthcare professionals (Mantri et al., 2020), with significant implications of moral injury for public sector workers during the COVID-19 pandemic (e.g. Ehman et al., 2023; Williamson et al., 2023). Despite considerable research in the last five years (Ter Heide & Olff, 2023), including research into moral distress in healthcare personnel (e.g. Boulton et al., 2023), a recent systematic review by Thibodeau et al. (2023) concluded that further research is needed to understand moral injury from the 'ground up', as it uniquely impacts different professions.

Emergency responders, including fire service, paramedic, police, ambulance, and emergency medicine staff, are likely to witness human suffering as part of their everyday work (Chirico et al., 2020). Their work requires them to make decisions in life-threatening situations and attempt to cope with the death of those in their care (Greenberg et al., 2020). Systematic reviews indicate that, compared with the general population, emergency responders are at increased risk of mental health difficulties, including depression, anxiety, post-traumatic stress disorder (PTSD; Jones et al., 2020) as well as suicidal thoughts and behaviours (Stanley et al., 2016). Emergency responders may experience complex moral conflicts, and Murray and colleagues (2018) highlighted the utility of the term 'moral injury' for understanding the experience of UK medical students working in emergency and prehospital medicine (Murray et al., 2018). Alongside the powerful motivation to help and the ethical expectation to 'do no harm' (Beauchamp & Childress, 2019), each emergency shift contains the possibility of harm, resulting in regular exposure to circumstances which may threaten or violate an individual's values. These experiences were found to be exacerbated by the demands and the aftermath of the COVID-19 pandemic (French et al., 2022; Ritter et al., 2023).

Moral injury is often the result of traumatic experiences (Lentz et al., 2021), and symptoms of PTSD and burnout can coincide with moral injury (Currier et al., 2015). For example, when police officers acted in opposition to their moral beliefs leading to moral injury, they also experienced greater PTSD symptoms and greater fatigue in feeling compassion for other people (Papazoglou, 2017). However, Shay (2014) argued that moral injury describes a different experience to PTSD, distinguishing people who experience PTSD as ones who lose the felt necessity of safety from those who experience moral injury and who lose the felt necessity of trust. More recent research (in military veterans) also highlighted that moral injury and PTSD were associated with different unhelpful cognitions, with moral injury linked specifically to factors such as lower self-worth, reduced perception of the reliability and trustworthiness of others, and reduced forgiveness of others, while PTSD was linked to increased threat of harm and reduced forgiveness of the situation (Boska & Capron, 2021).

Emergency responders may work in organisational cultures that emphasise personal strength, saving others, and self-reliance (Jones et al., 2020). In the UK, emergency responders may experience conflicts between their values and the restrictions of resource-limited organisations (Williams et al., 2020). Qualitative research with National Health Service (NHS) staff during the COVID-19 pandemic identified the importance of betrayal-based moral injury through a loss of trust in leadership and a fractured relationship with

the NHS as an organisation (French et al., 2022). Members of staff identified betrayal in the form of abandonment from leaders and the organisation (e.g. 'If I die, they do not care'; French et al., 2022, p. 517).

While all emergency responders work with the public, experiences and working cultures vary across professions. Here, we explore the experiences of police, fire fighters, paramedics and emergency response medics. There is an increase in investment in the mental health of organisations employing first-response staff in the UK, through sources of support by organisations like Mind UK's Blue Light programme, via charities such as The Ambulance Support Charity (TASC), and through the employment of specialist psychologists to support staff wellbeing. While there is more support across organisations, especially regarding exposure to traumatic situations at work, the experience of work is not the same for e.g. a police officer and a fire fighter. A report by the Police Federation from Greater Manchester Police highlights interactions with the public e.g. during the recent public disorder in the North of England, which put police at risk of physical harm and abuse while restoring order (cf. den Heyer, 2023). By contrast, a fire fighter is less likely to be threatened with physical harm from a member of the public in the execution of their duty. Police, paramedics and doctors can all be investigated by regulatory bodies, and the risks of distress and suicide by those under investigation has been highlighted in a series of reports (Hawton, 2015). The erosion of traditional sources of support has been reported across professions, with fewer staff working more shifts and overtime, fewer spaces to congregate to debrief jobs and cases, changes in training, and crewing practices, which see more lone working or working away from home, are issues for all first responders.

Although moral injury appears to be a highly relevant concept for emergency responders, the term is multifaceted, encompassing both witnessing and committing transgressions against one's moral code and evoking emotions such as shame, guilt, and feelings of betrayal. Furthermore, the development of a moral code itself is interwoven with many aspects of human experience, including evolutionary and biological mechanisms of in-group cooperation and cultural and social practices of religion and law, as well as individual and relational childhood experiences (Litz & Kerig, 2019), adding to the complexity of the concept. Attempting to capture this multifaceted construct in healthcare professionals, Mantri et al. (2020) developed a questionnaire, the Moral Injury Symptom Scale-HP, which covers facets of betrayal, guilt, shame, moral concerns, religious struggle, loss of religion/spiritual faith, loss of meaning, difficulty forgiving, loss of trust, and self-condemnation. However, it remains unclear how much these facets resonate with emergency responders, including those who are not in healthcare, and whether there are individual differences in the identification with different facets of moral injury.

The aim of the present study was to contribute to the conceptualisation of moral injury in emergency responding. We specifically focused on the UK, because working conditions for emergency responders have been challenging, as reflected in recent strike actions undertaken by a range of emergency responders (BBC, 2023). In this context, we aimed to (1) identify statements covering different facets of moral injury within emergency responding, and (2) explore how UK emergency responders in different roles would identify with these statements.

To address these aims, we adopted a Q-methodology (mixed-method) design, which allows researchers to explore distinct viewpoints on a topic of interest (Watts & Stenner, 2012). The Q-sort approach includes two phases: first, generation of a Q-set that captures viewpoints or experiences, and second, a Q-sort, in which individuals sort statements according to, for example, how much statements apply to them, and provide additional qualitative information on the individual statements and sorting process. Using a quantitative method (by-person factor analysis; see below), the Q-sort analysis results in a factor solution of distinct viewpoints, to which individual respondents are assigned. Factors are interpreted from the solution, taking into account the qualitative information. As such, findings using Q-sorts cannot be generalised beyond the sample on which they are based. However, they allowed us to examine the facets of moral injury with which our sample of emergency responders identified. This required that the Q-set contained a broad range of questions through saturation of the construct. Moreover, we examined additional qualitative data to understand how the term moral injury applies to different groups (types of responders), who may be exposed to, or involved in, moral transgressions in different contexts. The latter may allow for the development of interventions to address the emotional consequences of moral injury (Thibodeau et al., 2023).

2. Method

2.1. Design

We used a mixed-method design, specifically Q-methodology, to capture distinct viewpoints regarding moral injury in emergency responders. First, we generated statements relating to moral injury to create a 'Q-set', that is, a set of opinion statements on moral injury in relation to emergency responding (see *The Q-Set*, below, for more details). Second, in the Q-sort phase, a separate group of emergency responders were recruited to sort the Q-set statements into different categories to represent how much they identified

with them. After sorting, participants were asked to provide qualitative feedback about the process of the Q-sort and the statements which felt most and least applicable to them. Using this Q-sort approach, we applied a quantitative analytic approach (see *Plan of Analysis*) to identify distinct factors (viewpoints), using qualitative quotes to interpret these viewpoints, and then assigned people to these viewpoints.

2.2. Participants

Ethical approval was granted in January 2021 by the Institutional Review Board of the University of Liverpool, UK. As Q-methodology aims to capture opinions rather than make generalisable conclusions about a population, a power analysis or specific sample size was not required. One approach to Q-methodology is to recruit approximately half the number of participants as the number of statements in the Q-set (Watts & Stenner, 2012). Whilst the number of items in a Q-set can range significantly, there is a precedent in the methodology of a Q set of 40–80 items (Watts & Stenner, 2012) and an average of approximately 40 (Churruca et al., 2021). Therefore, between 20–30 emergency responders were sought for the Q-sort phase. Participants were eligible to take part if they were aged 18 years or over and had experience working in a professional capacity in emergency contexts in the UK within the last 12 months. Participants were required to complete the Q-sort in English via the internet. Participants were excluded if their work in emergency responding was solely as part of the military.

Participants were recruited online via email advertisements and social media platforms. The final sample comprised 21 participants, with most representation from police and fire services (see Table 1). The sample included a range of years of experience: 11 people had worked with emergencies for 10 years or less, while 10 people had worked in emergency settings for 11 years or more.

Table 1. Demographic Information by Q-Sort Factor.

Demographics	Sample[a] *N*	Factor 1 *N*	Factor 2 *N*	Factor 3 *N*
Gender[b]				
Male	15	7	4	3
Female	6	4	0	2
Profession				
Police	8	7	0	1
Fire Service	5	2	2	1
Emergency Medicine	2	0	0	2
Ambulance	3	2	0	0
Community First Responder	3	0	2	1
Years working in emergencies				
0–5	6	1	0	4
6–10	5	5	0	0
11–15	3	1	1	1
16–21	3	2	1	0
21+	4	2	2	0

[a]One participant did not load onto any one factor. Consistent with how results are presented using the Q-methodology analysis software, this participant is represented in the sample demographics, but not the factor demographics.
[b]No participants identified as non-binary.

2.3. Materials and measures

2.3.1. The Q-Set

We developed a structured Q-set through individual consultations with seven individuals. One person was a researcher and six had extensive experience of working directly in emergency contexts with representation from police, emergency medicine, ambulance services and fire services (see Supplementary Materials, Supplementary Figure 1, and Supplementary Table 1 for a detailed description of the Q-set development phase and example items by category). We also used the Moral Injury Symptom Scale-HP (Mantri et al., 2020) as a way of organising statements into broad categories of betrayal, guilt, shame, moral concerns, religious struggle, loss of religion/spiritual faith, loss of meaning, difficulty forgiving, loss of trust and self-condemnation. The initial concourse was refined to a 45-statement Q-set presented in the Q-sort phase. A full list of statements can be found in the composite Q-sort grid for each factor (see below) and in Supplementary Table 2.

2.3.2. The Q-Sort

The Q-sort was developed as an online survey, powered by Qualtrics (https://www.qualtrics.com/uk/). To measure the extent to which participants identified with statements on moral injury using Q-methodology, a −4 (*most unlike me*) to +4 (*most like me*) Q-grid was developed for participants to sort the 45-statement Q-set. Each box on the grid represented a position for one statement to be sorted into (see Figure 1 for how the grid was displayed). Sorting statements into the grid provided quantitative data about the extent to which participants identified with this statement regarding moral injury.

2.4. Procedure

Participants received an anonymous survey link, which provided the participant information sheet and informed consent form. After consenting, participants completed demographic information, including gender, profession, and years working in emergency services and then asked to sort the Q-set into three broad categories, (‘agree’, ‘disagree’, and ‘neutral’), by clicking and dragging the statements into the corresponding boxes. Statements were presented in a random order. The initial sort enabled participants to become familiar with the statements, which can guide participants’ more fine-grained decisions in the main Q-sort (Watts & Stenner, 2012). Subsequently, participants were asked to sort the statements again, this time into the nine categories, ranging from ‘most unlike me’ to ‘most like me’, to align with the Q-sort grid. Participants were

Most unlike me (-4)	Largely unlike me (-3)	Somewhat unlike me (-2)	A little unlike me (-1)	Neither like nor unlike me (0)	A little like me (1)	Somewhat like me (2)	Largely like me (3)	Most like me (4)
** < 36. I have complied with orders that go against every moral fibre of my being	2. I have acted in ways that violate my own moral code or values	** < 12. I feel ashamed that as a professional I look forward to dealing with people's suffering	* 4. I had to make decisions at times when I didn't know the right thing to do	** 42. Working during the pandemic resulted in me having to hold more responsibility alone	** 9. I am concerned that the culture of my profession has changed me	13. I feel I am abandoning my colleagues when I cannot go into work	**38. I make jokes about strange and terrible situations	5. Seeing so much death has changed me
* < 6. I have made mistakes that led to injury or death	* 15. I am scared of going to work	27. I am suspicious of what happens to information I share about what I witness at work	33. I have thought about leaving my job because I can't get ethical dilemmas out of my mind	44. It is hard to deal with my loved ones' responses when I am involved in high-profile emergency situations	41. No one helps you figure out how to manage the panic and fury of ethical dilemmas	24. I had no choice other than to become resilient because of the dirty things I have to do	** > 30. Working in this job ultimately puts you off people	** > 20. I am concerned that the general public have lost faith in my organisation
	** < 8. Things that happen at work have led me to question my faith or belief in a higher power	23. I am ashamed of being part of a system where people come to harm	26. I find it hard to trust other professionals	** < 14. I feel betrayed by tokenistic conversations about support without follow through	45. In emergency working, I have experienced a conflict between the logical thing to do and the human thing to do	** 32. If I doubt whether or not I did my best in an emergency situation, it will eat me up inside	25. If I did not care about my work, it would not damage me as much	
	17. I sometimes feel God is punishing me for what I've done or not done at work	31. There are times at work I am too scared to make decisions because of the potential fallout	40. I am angry that I have to choose between my duty of care and my personal wellbeing	39. I have to make decisions which could put my colleagues at risk	7. A lack of resource has prevented me from reducing suffering or saving a life	** > 28. I am bothered that I feel numb or disconnected in life-threatening situations	1. I have seen things that are morally wrong	
		37. I will not forgive my employer for what they have made me do	** < 22. Leaving my job would reflect poorly on me as a person	16. I have forgiven myself for what has happened to me or others whom I work with	35. I have had to decide whether to disregard a person's wishes in order to save their life	34. It's painful to to give up on someone when you have been fighting for them to live		
			** < 18. I feel conflict between telling the truth and protecting people from distress	* < 19. I am angry about how my organisation scapegoats members of my team	** 3. I have felt guilt for failing to save a life			
			21. I feel guilty for times of being bored at work during COVID	11. I am troubled by witnessing health inequalities at work	43. I do not like being called a hero			
				** > 10. I used to speak up about moral dilemmas at work, now I just get on with it				
				** < 29. I struggle to be polite when interacting with people who have done something I consider to be wholeheartedly wrong				

Figure 1. Composite Q-sort for Factor 1 'Trying to Help while Feeling Hated, Misunderstood, and Undervalued'.

Note. * = statistically distinguishing statement at .05 level; ** = statistically distinguishing statement at .01 level; > = z score indicates higher loading on this factor compared with other factors; < = z score indicates lower loading on this factor compared with other factors. Created in BioRender: https://BioRender.com/1jk6zzr

then invited to provide qualitative comments specifically on the statements they had placed into the 'most like me' and the 'most unlike me' categories, so these quotes could add to the richness of the analysis of the factors that resulted. Participants were encouraged to share any ideas for statements they felt were missing from the current research and share their experience of the sorting process. Following this, participants could enter a prize draw with three chances to win a £30 Amazon voucher in appreciation of their time. Data collection ran between December 2021 and February 2022.

2.5. Plan of analysis

A by-person factor analysis with varimax rotation was carried out using KenQ Analysis Desktop Edition (KADE; https://shawnbanasick.github.io/ken-q-analysis/). Data was extracted using centroid factor analysis (a commonly used method of data extraction in Q methodology, suitable for small datasets) to identify clusters of shared points of view across respondents, identifying patterns of similarity between individual Q-sorts. This was then used to create composite Q-sorts, a hypothetical Q-sort that represented each factor. To determine the final factor solution, we reviewed the scree plot, and applied the Kaiser criterion, retaining all factors with an Eigenvalue of >1. The analysis yielded a quantitative factor solution that represents how participants identified with the statements, and the software assigned each participant to a factor based on how they organised the statements. Interpretation of the factors included a review of salient and distinguishing statements for each factor. Qualitative comments were used to further enrich the factors and to develop a title for that factor.

KADE output included a composite Q-sort for each factor, which is a visualisation of a hypothetical Q-sort that represents that factor. Each factor was refined and named through review of the statements' rankings in

composite Q-sorts, starting with salient statements, that is, those placed in +4 (most like me) and −4 (most unlike me) positions for each factor. Statistically significant distinguishing statements for each factor were also used to interpret the factor solution. These are statements ranked in a different position in one factor (applying a .05 and .01 significance level), compared to the other factors. Statistically distinguishing statements for each factor is important for interpreting what is distinct about that viewpoint. Composite Q-sorts also identify which statements were placed higher or lower in that factor, compared to other factors by using Z scores. Qualitative comments by participants were used to further understand and contextualise that viewpoint. Demographic information (see Table 1) was reviewed last to reduce researcher bias in interpreting the factor names and explanations/ contextualisation.

3. Results

A three-factor solution was obtained. The final solution explained 36% of the variance: 14% of the variance was explained by Factor 1, 9% by Factor 2, and 13% by Factor 3. The factors are outlined below.

3.1. Factor 1: trying to help while feeling hated, misunderstood, and undervalued

The composite Q-sort for Factor 1 is presented in Figure 1. As Table 1 shows, 11 participants loaded on this factor most strongly. Statements, 'Seeing so much death has changed me' and 'I am concerned that the general public have lost faith in my organisation' were in the 'most like me' category. The statements, 'I am bothered that I feel numb or disconnected in life-threatening situations' and, 'I used to speak up about moral dilemmas, now I just get on with it' also loaded more strongly on Factor 1 than on the other two factors. Taken together, this denotes a certain apathy and/or disconnection from morally injurious events. This is further supported by free-text comments from participants who were defined by this factor:

> ID12: … 'I think I have fully disconnected myself. We are expected to have a higher limit of strength. We are expected to get on with it and move on. No wonder so many of us leave the job with PTSD.'

However, Factor 1 also represented feelings of confidence concerning ethical dilemmas, that is, feeling certain about one's values. 'Most unlike me' were statements, 'I have complied with orders that go against every moral fibre of my being' and, 'I have made mistakes that led to injury or death'.

Regarding losing faith in one's organisation, qualitative (free-text) feedback reflected feeling undervalued by the public and the media, and being invalidated and unprotected by the government:

> ID12: 'The hatred for the police grew during covid. We were still out, doing what we always do and yet we were hated more. We were not even listed in the drop down of occupations on the gov website when applying for a covid test. We were not listed as necessary roles to get the vaccine with other emergency services. We got spat at and attacked by members of the public and went home and read stories of people hating us and the government forgot us. [This] is a blow that I don't think I will ever properly recover from.'

and

> ID16: 'Social media goes out of its way to pick us apart and humiliate us. It's not to say that I don't think it hasn't been good to prevent excesses by Police; accountability is important. But castigating officers acting poorly under intense stress isn't fair, and it also isn't reflective of them or the organisation overall. But if 90% of people only have the bad stuff gracing their accounts, that will influence their opinions. The fallout is obvious. Assaults against Officers up. People are less likely to assist us in investigations. Even murders! People are more likely, with no context or understanding, [to] interfere or take the side of the detained person, because Police putting in a stop must automatically being doing something dodgy. The greater upset for me is that there is no ability to flag up much that is counter to this. People don't know just what good work we do.'

Relatedly, statements distinguishing this factor from Factors 2 and 3 (highlighted in dark grey in Figure 1) included, 'Working in this job ultimately puts you off people', supported by the following qualitative feedback:

> ID7: 'The number of difficult people that we deal with, makes my personal circle smaller and my patience for wider social engagement is reduced in my personal life.'

Taken together, Factor 1 appears to focus on externally-focused moral injury, including feelings of disconnection and loss of trust in others, while also feeling the general public have lost trust in their profession. Factor 1 explained the biggest portion of variance in the factor solution, and the highest ratio of police officers across the sample belonged within Factor 1 (see Table 1).

3.2. Factor 2: eaten away by the job

Factor 2 (Figure 2) had four defining respondents and was similar to Factor 1 in the impact of being changed by seeing death. However, distinct from Factor 1, statements rated 'most like me' included 'If I doubt whether or not I did my best in an emergency situation, it will eat me up inside'. Free-text qualitative feedback included aspects of how experiences had fundamentally changed them. Instead of being defined by feeling numb or disconnected (which was ranked

Most unlike me (-4)	Largely unlike me (-3)	Somewhat unlike me (-2)	A little unlike me (-1)	Neither like nor unlike me (0)	A little like me (1)	Somewhat like me (2)	Largely like me (3)	Most like me (4)
17. I sometimes feel God is punishing me for what I've done or not done at work	** < 4. I had to make decisions at times when I didn't know the right thing to do	27. I am suspicious of what happens to information I share about what I witness at work	20. I am concerned that the general public have lost faith in my organisation	18. I feel conflict between telling the truth and protecting people from distress	34. It's painful to to give up on someone when you have been fighting for them to live	1. I have seen things that are morally wrong	14. I feel betrayed by tokenistic conversations about support without follow through	5. Seeing so much death has changed me
** < 28. I am bothered that I feel numb or disconnected in life-threatening situations	** < 26. I find it hard to trust other professionals	30. Working in this job ultimately puts you off people	33. I have thought about leaving my job because I can't get ethical dilemmas out of my mind	** > 37. I will not forgive my employer for what they have made me do	19. I am angry about how my organisation scapegoats members of my team	** > 8. Things that happen at work have led me to question my faith or belief in a higher power	** > 9. I am concerned that the culture of my profession has changed me	** > 32. If I doubt whether or not I did my best in an emergency situation, it will eat me up inside
	** < 38. I make jokes about strange and terrible situations	** < 35. I have had to decide whether to disregard a person's wishes in order to save their life	* < 16. I have forgiven myself for what has happened to me or others whom I work with	40. I am angry that I have to choose between my duty of care and my personal wellbeing	24. I had no choice other than to become resilient because of the dirty things I have to do	* > 39. I have to make decisions which could put my colleagues at risk	** > 3. I have felt guilt for failing to save a life	
	21. I feel guilty for times of being bored at work during COVID	2. I have acted in ways that violate my own moral code or values	** < 42. Working during the pandemic resulted in me having to hold more responsibility alone	** < 13. I feel I am abandoning my colleagues when I cannot go into work	44. It is hard to deal with my loved ones' responses when I am involved in high-profile emergency situations	11. I am troubled by witnessing health inequalities at work	29. I struggle to be polite when interacting with people who have done something I consider to be wholeheartedly wrong	
		10. I used to speak up about moral dilemmas at work, now I just get on with it	** < 43. I do not like being called a hero	* < 41. No one helps you figure out how to manage the panic and fury of ethical dilemmas	* 22. Leaving my job would reflect poorly on me as a person	25. If I did not care about my work, it would not damage me as much		
			31. There are times at work I am too scared to make decisions because of the potential fallout	7. A lack of resource has prevented me from reducing suffering or saving a life	** > 15. I am scared of going to work			
			36. I have complied with orders that go against every moral fibre of my being	12. I feel ashamed that as a professional I look forward to dealing with people's suffering	45. In emergency working, I have experienced a conflict between the logical thing to do and the human thing to do			
				** > 6. I have made mistakes that led to injury or death				
				23. I am ashamed of being part of a system where people come to harm				

Figure 2. Composite Q-sort for Factor 2 'Eaten Away by the Job'.

Note. * = statistically distinguishing statement at .05 level; ** = statistically distinguishing statement at .01 level; > = z score indicates higher loading on this factor compared with other factors; < = z score indicates lower loading on this factor compared with other factors. Created in BioRender. https://BioRender.com/esxyvbo

'most unlike me'), Factor 2 was defined by concerns that the culture of their profession had changed them, feelings of guilt for failing to save a life, and questioning their faith in a higher power because of the nature of their work. This was substantiated by the qualitative feedback:

> ID11: 'I have dealt with so much and did feel unsure at some and cannot forget them. I am eaten up now.'

> ID17: 'I feel more irritable and not the happy person I used to be.'

Compared with other factors, respondents who scored highly on this factor had higher agreement with statements regarding difficulty forgiving themselves and feeling scared of going to work, as also shown by the following qualitative feedback:

> ID11: 'I thought I was stronger but the linking of the death with a person was hard to take. I now suffer PTSD and so feel changed from what I felt was a stronger me.'

The importance of seeking help is noteworthy for Factor 2. 'I find it hard to trust other professionals' was rated as 'largely unlike me', and, 'No one helps you figure out how to manage the panic and fury of ethical dilemmas' was a statement that distinguished this factor from the other two. However, some of the quotes indicated complexities around seeking help and connection, with another fallout from the work being increased reluctance to talk to others:

> ID17: 'I used to feel talking to people was helpful but now it is just an unwanted task.'

Yet others had found ways to cope with their work given time:

> ID19: 'Through time and experience you develop a coping mechanism to [sic] dealing with death.'

Individuals who aligned with this factor had worked in emergency situations for the longest time on average, which may explain why this factor was highly associated with feelings of having been changed by work. It may speak to the cumulative impact of emergency responding and the generated coping methods.

3.3. Factor 3: it's all on me: personal responsibility and personal protection

Factor 3 had five defining respondents and had personal responsibility, trust and protective mechanisms as the key features. Distinguishing statements for Factor 3 included statements such as 'Working during the pandemic resulted in me having to hold more responsibility alone', 'I am suspicious of what happens to information I share about what I witness at work', and 'I am angry that I have to choose between my duty of care and my personal wellbeing'.

This point of view was reflected in the qualitative feedback by respondents who felt they had a moral responsibility to call out things that violated their values.

> ID5: 'I would refuse to comply with orders which go against every moral fibre in my body. If I were asked to comply with orders which I felt were morally wrong, I would not hesitate to question the reasoning and rationale behind these, escalating if required.'

Statements placed in the 'most like me' category for Factor 3 (Figure 3) were, 'I make jokes about strange and terrible situations' and, 'I struggle to be polite when interacting with people who have done things that I consider to be wholeheartedly wrong'. Statements placed in the 'most unlike me' category were statements like, 'I am scared of going to work' and, 'I sometimes feel God is punishing me for what I've done or not done at work.'

Whilst quotes from Factor 3 identify a loyalty to colleagues and not wanting to 'let the team down', there was overall a theme of loss of trust in authority and the wider organisation, perhaps leaving individuals feeling they must personally find ways to cope with the impact of their work. This illustrates ways that individuals attempted to protect themselves when working in emergency contexts, including using humour as a coping mechanism. Qualitatively, a 'dark sense of humour' was discussed as both something that people bring to their work, a part of who they are, but also as a useful coping strategy that teams develop over time. The following qualitative feedback shows the instrumental view of humour:

> ID6: 'This [using humour] is common amongst the teams I have worked in and is part of the recovery process after an incident.'

> ID4: 'I don't believe anyone other than those working closely [with] myself care anything about staff wellbeing. I make jokes … . I think [jokes] make stressful hard to deal with scenarios makes things light-hearted and is a coping mechanism for many.'

This viewpoint might reflect an experience of feeling stuck and having to develop ways to cope that do not rely on support from their organisation. There was an emphasis on personal responsibility, scoring higher than other factors on statements, 'Leaving my job would reflect poorly on me as a person' and, 'I feel I am abandoning my colleagues when I cannot go into work'. The qualitative feedback expounded on the effects on teammates:

> ID5: 'I believe this is a feeling within the NHS as a whole. We are all aware of the immense stress and pressure our team is under and being unable to go to work with [sic] have a knock-on effect to our colleagues. Personally speaking, I went into work when feeling 'under the weather' as I did not want to 'let the team down', the next day I tested positive for Covid. Therefore, I had inadvertently put my team at risk, by not wanting to let the team down.'

Developing personal strategies to cope may be necessary when there is a lack of trust in the organisation, including concerns about members of staff being scapegoated by the organisation:

> ID9: 'too often the case whereby they are quick to take credit and even quicker to shift responsibility.'

Factor 3 was less associated with ideas of being changed by the work, and was distinguished from other factors by significantly lower rankings of the statement regarding feeling guilty about failing to save a life. The qualitative feedback again indicated a strong team trust:

> ID6: 'I believe the chances of saving life have always been improved by myself and my colleagues being there.'

Individuals who scored highly on Factor 3 had on average worked in emergency contexts for the least amount of time, and the factor also best represented the points of view of respondents working in hospital wards.

3.4. Shared and missing concepts

Across factors, statements which appeared to have the most consensus related to the impact of a lack of resources, forgiving oneself or forgiving others, having conflict between telling the truth versus protecting people from distress, thinking about leaving the job due to ethical dilemmas, and the difficulties in dealing with loved ones' responses when involved in high-profile emergencies. Statements of consensus may indicate aspects of shared experience; these were often statements placed in more neutral positions on the grid (e.g. 'neither like nor unlike me'), suggesting that these are aspects that were less defining to the emergency responders' distinct opinions on moral injury.

Most unlike me (-4)	Largely unlike me (-3)	Somewhat unlike me (-2)	A little unlike me (-1)	Neither like nor unlike me (0)	A little like me (1)	Somewhat like me (2)	Largely like me (3)	Most like me (4)
* < 15. I am scared of going to work	31. There are times at work I am too scared to make decisions because of the potential fallout	** < 5. Seeing so much death has changed me	12. I feel ashamed that as a professional I look forward to dealing with people's suffering	* > 4. I had to make decisions at times when I didn't know the right thing to do	1. I have seen things that are morally wrong	** > 40. I am angry that I have to choose between my duty of care and my personal wellbeing	13. I feel I am abandoning my colleagues when I cannot go into work	** > 38. I make jokes about strange and terrible situations
17. I sometimes feel God is punishing me for what I've done or not done at work	37. I will not forgive my employer for what they have made me do	** 8. Things that happen at work have led me to question my faith or belief in a higher power	26. I find it hard to trust other professionals	44. It is hard to deal with my loved ones' responses when I am involved in high-profile emergency situations	35. I have had to decide whether to disregard a person's wishes in order to save their life	14. I feel betrayed by tokenistic conversations about support without follow through	** > 42. Working during the pandemic resulted in me having to hold more responsibility alone	29. I struggle to be polite when interacting with people who have done something I consider to be wholeheartedly wrong
	* 6. I have made mistakes that led to injury or death	2. I have acted in ways that violate my own moral code or values	21. I feel guilty for times of being bored at work during COVID	** 28. I am bothered that I feel numb or disconnected in life-threatening situations	18. I feel conflict between telling the truth and protecting people from distress	41. No one helps you figure out how to manage the panic and fury of ethical dilemmas	** > 27. I am suspicious of what happens to information I share about what I witness at work	
	10. I used to speak up about moral dilemmas at work, now I just get on with it	30. Working in this job ultimately puts you off people	** < 25. If I did not care about my work, it would not damage me as much	34. It's painful to to give up on someone when you have been fighting for them to live	43. I do not like being called a hero	19. I am angry about how my organisation scapegoats members of my team	22. Leaving my job would reflect poorly on me as a person	
		** < 3. I have felt guilt for failing to save a life	36. I have complied with orders that go against every moral fibre of my being	39. I have to make decisions which could put my colleagues at risk	11. I am troubled by witnessing health inequalities at work	45. In emergency working, I have experienced a conflict between the logical thing to do and the human thing to do		
			33. I have thought about leaving my job because I can't get ethical dilemmas out of my mind	20. I am concerned that the general public have lost faith in my organisation	7. A lack of resource has prevented me from reducing suffering or saving a life			
			23. I am ashamed of being part of a system where people come to harm	** < 9. I am concerned that the culture of my profession has changed me	16. I have forgiven myself for what has happened to me or others whom I work with			
				* < 24. I had no choice other than to become resilient because of the dirty things I have to do				
				** < 32. If I doubt whether or not I did my best in an emergency situation, it will eat me up inside				

Figure 3. Composite Q-sort for Factor 3 'It's All On Me: Personal Responsibility and Personal Protection'.

Note. * = statistically distinguishing statement at .05 level; ** = statistically distinguishing statement at .01 level; > = z score indicates higher loading on this factor compared with other factors; < = z score indicates lower loading on this factor compared with other factors. Created in BioRender: https://BioRender.com/16qkf4e

Participants were asked to provide details of statements they felt were missing from the Q-set (see Supplementary Table 3). Ten responses included asking further about specific mental health experiences, in particular anxiety and depression, as well as a statement about the need to hide how hard it can be. Participants requested more statements about coping and support. One participant said that statements lacked an exploration of the slow build-up of burnout or apathy over time. One participant also noted the impact of specific decisions, such as withdrawing a life-saving intervention for an individual who would benefit overall from a peaceful and dignified death. The variety of responses supported a multifaceted conceptualisation of moral injury.

4. Discussion

This research explored the strength of identification with moral injury viewpoints for emergency responders. Consistent with Shay's (2014) argument that moral injury is distinguished from PTSD by a loss of the necessity of trust and findings that moral injury (but not PTSD) is associated with reduced perceived trustworthiness of others (Boska & Capron, 2021), loss of trust was a key finding in our study. Moreover, our results disentangle multiple forms of loss of trust – internal, external, and structural. The three viewpoints (i.e. factors) that emerged overarchingly indicated a loss of trust in and from others (Factor 1), a loss of trust in oneself (Factor 2), and a loss of trust in organisations and authority (Factor 3), though emotional responses (shame, guilt) and cognitions (e.g. concerning low self-worth) were also salient. Specifically, Factor 1 included externalising emotions of betrayal, disenfranchisement, criticism by the general public, and lack of genuine appreciation (Lentz et al., 2021). As a result, an 'us vs. them' in-group/out-group dynamic may emerge (Litz & Kerig, 2019), leaving emergency responders feeling disconnected.

Qualitative quotes from Factor 1 showed there was a felt loss of trust in their professions by the general public – the people they work to protect. Whilst Factor 1 captured apathy and disconnection, Factor 2 was associated with heightened emotions and feeling overwhelmed. Specifically, these included internalising emotions of shame and guilt. Factor 3 aligned with previous findings regarding betrayal and a loss of trust in authority, as people expressed the importance of personal responsibility, personal protection and suspicion, and/or fractured relationships with the wider organisation (French et al., 2022; Riedel et al., 2022).

Consistent with prior literature on the multidimensionality of moral injury (Weber et al., 2023), our findings suggest there are diverse opinions (and strengths of opinions) about moral injury in emergency responders. Emergency responders also endorsed opinions of moral injury that emphasised systemic factors, including perceptions and relationships with the public, the media, and their organisation.

Social isolation, in varying ways, was identified across all three factors, in line with literature outlining effects of moral injury on social isolation (Griffin et al., 2019). In our findings, Factor 1 included the experience of being 'put off people' at work, with qualitative comments indicating reduced social connection, and Factor 3 highlighted the pressure of dealing with situations alone. Factor 2 was also indicated by lower scores on trusting other professionals and feeling supported in one's decision making. Over time, emergency responders may have developed a greater reluctance to connect with others as shown by the quotes of those in the profession the longest. Although our findings support links between moral injury and social withdrawal or isolation, it is also important to note that moral injury can engender attempts to repair relationships, with social approach behaviours including seeking to make amends (Boska & Capron, 2021) and emotions such as guilt also motivating prosocial behaviour (Baumeister et al., 1994). Given the impact of moral injury on relationships, our findings provide a basis for group interventions for moral injury. Whilst individual psychological work may enable increased self-compassion and self-forgiveness, it may further reinforce the 'it's all on me' narrative that moral injury is an individual's problem to be addressed. A narrow focus on one person may not sufficiently deal with power imbalances and ruptures in trust that surpass that individual (Thibodeau et al., 2023). This is where group work can impact wellbeing: offering opportunities for emergency responders to share stories and normalise vulnerability to moral distress (Adamson et al., 2018; Williams et al., 2020). In the context of psychological vulnerability, systemic pressures, and strike action, it is timely for researchers and practitioners to understand emergency responders' experiences of moral injury, and to respond as part of a 'trustworthy clinical community' (Shay, 2014, p. 182).

This research was carried out during the Covid-19 pandemic, a global disaster, which was a unique and significant time to gather data on moral injury. The pandemic was arguably a 'perfect storm' for moral injury in emergency responding, and it is possible that systemic factors were particularly highlighted due to this context (French et al., 2022; Ritter et al., 2023). In this context, social disconnection and avoidance were understandable reactions to traumatic experiences and emotional distress (Greenberg et al., 2020). Add to this a lack of opportunity for shift workers to seek support, combined with unsupportive organisational attitudes towards mental health, and one can see the barriers to seeking support for emergency responders (Haugen et al., 2017).

4.1. Limitations and considerations

A limitation of the present research is that the people we heard from were those who had found a way to continue working in emergency contexts, since participants had to be working in emergency contexts within the last 12 months to be included in the study. Our results could be influenced by survivor bias (Hines et al., 2021), as we missed the opinions of emergency responders who did not continue in their work. Those who left may have been the most impacted by morally injurious events at work. Thus, key viewpoints or experiences of moral injury may not have been captured. Moreover, even when reaching saturation, participants noted certain missing aspects in the qualitative comments. Participants wanted to share mental health experiences, such as anxiety/depression, and coping and support. We would consider these aspects as consequences of moral injury rather than relating to moral injury per se, but this overlap would be useful to explore in future research.

A further potential limitation was the online nature of the Q-sort. Although evidence supports online Q-sorts, the gold standard remains face-to-face with an interviewer (Watts & Stenner, 2012). Because of Covid-19 restrictions, we could not complete data collection in person, although we could have emulated a face-to-face experience by conducting the Q-sorts over a video call. However, in the case of moral injury, an online Q-sort was deemed preferable, as it may have reduced the impact of response bias and social desirability effects, especially since we were exploring ethical dilemmas, loss of trust, shame, and guilt. In addition, the online Q-sort enabled responses to be collected from across the UK. Concerning the process of completing the Q-Sort, while participants may feel restricted about where they can place certain statements (Watts & Stenner, 2012), the strength of this

method is that it encourages participants to rank each statement in relation to other statements, and gives space for participants to express their views with qualitative feedback alongside the Q-sort (Watts & Stenner, 2012).

Lastly, we recruited a range of emergency responders into this study, and it is important to note that participants came from different services and experienced potentially different working cultures. We did not want to limit type of responder or other factors such as length of time working in the profession to enable a 'ground up' exploration of moral injury (cf. Thibodeau et al., 2023) in emergency responders. Our interesting findings that Factor 1 was most salient for people working in the police, but that time spent in the profession (rather than belonging to a particular profession) was associated with Factor 2 and an 'eroding' idea of cumulative exposure to morally injurious events, support this choice and provide insights and impetus for future research.

4.2. Future directions

Further research is needed to probe the relationship between particular professions, the public, and the media, since more structural issues exist that intersect with moral injury, including geopolitical forces and social justice. Qualitative research exploring the factors that enhance employee support and trust may be a helpful next step to best support emergency responders experiencing moral injury. Schwartz rounds provide a structured and compassionate group space for healthcare workers at risk of moral injury to reflect on the emotional impact of their work (Litam & Balkin, 2021) and have been experienced positively by clinical and non-clinical healthcare staff (Flanagan et al., 2020). At more systemic levels, many of our participants expressed difficulty with the lack of institutional trust, particularly in public perceptions (e.g. police). These Schwartz rounds could be tailored to various groups, supporting their coping strategies. Further, if moral injury could be a subject for psychometric testing with larger cohorts, a questionnaire could be developed to measure pre- and post-moral injury.

5. Conclusion

In the UK, following the global pandemic and in the context of public sector crises and difficulties with staff retention (Hendrickson et al., 2022), it is timely to explore what viewpoints emergency responders have about moral injury and how strongly they identify with these different viewpoints. Our research found that emergency responders' viewpoints map onto differing positions of moral injury characterised (but not limited to) (1) loss of trust from and in others, (2) loss of trust in oneself, and (3) loss of trust in authority. These also differed by profession and length of professional experience, although common struggles involved the role of the government, the media, and the organisation. This research provides further supporting evidence that moral wounds experienced by emergency responders are highly relational and systemic. Therefore, we argue that healing from moral injury must extend beyond the individual and facilitate opportunities to repair relational ruptures and rebuild trust.

Acknowledgements

We gratefully acknowledge the emergency responders who were involved in the Q-set generation, and those who took part in this study.

Disclosure statement

No potential conflict of interest was reported by the authors.

Author contributions

Verity Bell: Conceptualisation, Methodology, Software, Formal analysis, Investigation, Data curation, Writing – Original Draft, Writing – Review and editing, Project administration; **Esther Murray**: Conceptualisation, Resources, Writing – Review & Editing, Supervision; **Luna Muñoz**: Conceptualisation, Methodology, Writing – Review & Editing; **Charlotte Krahé**: Conceptualisation, Methodology, Supervision, Writing – Original Draft, Writing – Review & Editing, Project administration.

Ethics approval

Ethical approval was granted by University of Liverpool Central University Research Ethics Committee A.

Consent to participate

Informed consent was obtained from all participants included in the study.

Data availability statement

Data will be available on request.

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References

Adamson, K., Sengsavang, S., Myers-Halbig, S., & Searl, N. (2018). Developing a compassionate culture within paediatric rehabilitation: Does the Schwartz Rounds™ support both clinical and nonclinical hospital workers in managing their work experiences? *Qualitative Health*

Research, 28(9), 1406–1420. https://doi.org/10.1177/1049732318768239

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: an interpersonal approach. *Psychological Bulletin*, *115*(2), 243–267. doi:10.1037/0033-2909.115.2.243

BBC news. (2023, 11 January). Strike dates: Who is striking in January and what are their pay claims? *BBC News*. https://www.bbc.co.uk/news/business-62134314

Beauchamp, T., & Childress, J. (2019). Principles of biomedical ethics: marking its fortieth anniversary. *The American Journal of Bioethics*, *19*(11), 9–12. https://doi.org/10.1080/15265161.2019.1665402

Boska, R. L., & Capron, D. W. (2021). Exploring the maladaptive cognitions of moral injury within a primarily combat-trauma military sample. *Psychological Trauma: Theory, Research, Practice, and Policy*, *13*(8), 861–868. https://doi.org/10.1037/tra0001071

Boulton, A. J., Slowther, A.-M., Yeung, J., & Bassford, C. (2023). Moral distress among intensive care unit professions in the UK: a mixed- methods study. *BMJ Open*, *13*, e068918. https://doi.org/10.1136/bmjopen-2022-068918

British Medical Association. (2021). Moral distress and moral injury: recognizing and tackling it for UK doctors. https://www.bma.org.uk/media/4209/bma-moral-distress-injury-survey-report-june-2021.pdf

Chirico, F., Nucera, G., & Magnavita, N. (2020). Protecting the mental health of healthcare workers during the COVID-19 emergency. *BJPsych International*, *18*(1), E1. https://doi.org/10.1192/bji.2020.39

Churruca, K., Ludlow, K., Wu, W., Gibbons, K., Nguyen, H. M., Ellis, L., & Braithwaite, J. (2021). A scoping review of Q-methodology in healthcare research. *BMC Medical Research Methodology*, *21*(1), 125. https://doi.org/10.1186/s12874-021-01309-7

Currier, J. M., Holland, J. M., Rojas-Flores, L., Herrera, S., & Foy, D. (2015). Morally injurious experiences and meaning in Salvadorian teachers exposed to violence.. *Psychological Trauma: Theory, Research, Practice, and Policy*, *7*(1), 24–33. https://doi.org/10.1037/a0034092

den Heyer, G. (2023). Assaults on police officers: a review of the predictors. In J. F. Albrecht & G. den Heyer (Eds.), *Police use of force: Global perspectives and policy implications* (pp. 233–264). Springer. https://doi.org/10.1007/978-3-031-22705-9_12

Ehman, A. C., Smith, A. J., Wright, H., Langenecker, S. A., Benight, C. C., Maguen, S., Pyne, J. M., Harris, J. I., Cooney, N., & Griffin, B. J. (2023). Exposure to potentially morally injurious events and mental health outcomes among frontline workers affected by the coronavirus pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*, *15*(3), 524–535. https://doi.org/10.1037/tra0001345

Fani, N., Currier, J. M., Turner, M. D., Guelfo, A., Kloess, M., Jain, J., Mekawi, Y., Kuzyk, E., Hinrichs, R., Bradley, B., Powers, A., Stevens, J. S., Michopoulos, V., & Turner, J. A. (2021). Moral injury in civilians: associations with trauma exposure, PTSD, and suicide behavior. *European Journal of Psychotraumatology*, *12*(1), 1965464. https://doi.org/10.1080/20008198.2021.1965464

Flanagan, E., Chadwick, R., Goodrich, J., Ford, C., & Wickens, R. (2020). Reflection for all healthcare staff: a national evaluation of Schwartz rounds. *Journal of Interprofessional Care*, *34*(1), 140–142. https://doi.org/10.1080/13561820.2019.1636008

French, L., Hanna, P., & Huckle, C. (2022). "If I die, they do not care": U.K. National Health Service staff experiences of betrayal-based moral injury during COVID-19.. *Psychological Trauma: Theory, Research, Practice, and Policy*, *14*(3), 516–521. https://doi.org/10.1037/tra0001134

Greenberg, N., Docherty, M., Gnanapragasam, S., & Wessely, S. (2020). Managing mental health challenges faced by healthcare workers during covid-19 pandemic. *BMJ*, *368*, m1211–3. https://doi.org/10.1136/bmj.m1211

Griffin, B. J., Purcell, N., Burkman, K., Litz, B. T., Bryan, C. J., Schmitz, M., & Maguen, S. (2019). Moral injury: An integrative review. *Journal of Traumatic Stress*, *32*(3), 350–362. https://doi.org/10.1002/jts.22362

Haugen, P. T., McCrillis, A. M., Smid, G. E., & Nijdam, M. J. (2017). Mental health stigma and barriers to mental health care for First Responders: A systematic review and meta-analysis. *Journal of Psychiatric Research*, *94*, 218–229. https://doi.org/10.1016/j.jpsychires.2017.08.001

Hawton, K. (2015). Suicide in doctors while under fitness to practise investigation. *BMJ*, *350*(feb13 3), h813. doi:10.1136/bmj.h813

Hendrickson, R. C., Slevin, R. A., Hoerster, K. D., Chang, B. P., Sano, E., McCall, C. A., Monty, G. R., Thomas, R. G., & Raskind, M. A. (2022). The impact of the COVID-19 pandemic on mental health, occupational functioning, and professional retention among health care workers and First Responders. *Journal of General Internal Medicine*, *37*(2), 397–408. https://doi.org/10.1007/s11606-021-07252-z

Hines, S. E., Chin, K. H., Glick, D. R., & Wickwire, E. M. (2021). Trends in Moral Injury, Distress, and Resilience Factors among Healthcare Workers at the Beginning of the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, *18*(2), 488–491. https://doi.org/10.3390/ijerph18020488

Jones, S., Agud, K., & McSweeney, J. (2020). Barriers and facilitators to seeking mental health care among First Responders: "Removing the darkness". *Journal of the American Psychiatric Nurses Association*, *26*(1), 43–54. https://doi.org/10.1177/1078390319871997

Lentz, L. M., Smith-MacDonald, L., Malloy, D., Carleton, R. N., & Brémault-Phillips, S. (2021). Compromised conscience: A scoping review of moral injury among firefighters, paramedics, and police officers. *Frontiers in psychology*, *12*, 639781. https://doi.org/10.3389/fpsyg.2021.639781

Litam, S. D. A., & Balkin, R. S. (2021). Moral injury in healthcare workers during COVID-19 pandemic. *Traumatology*, *27*(1), 14–19. https://doi.org/10.1037/trm0000290

Litz, B. T., & Kerig, P. K. (2019). Introduction to the special issue on moral injury: Conceptual challenges, methodological issues, and clinical applications. *Journal of Traumatic Stress*, *32*(3), 341–349. https://doi.org/10.1002/jts.22405

Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, *29*(8), 695–706. https://doi.org/10.1016/j.cpr.2009.07.003

Mantri, S., Lawson, J. M., Wang, Z., & Koenig, H. G. (2020). Identifying moral injury in healthcare professionals: The moral injury symptom scale-HP. *Journal of Religion and Health*, *59*(5), 2323–2340. https://doi.org/10.1007/s10943-020-01065-w

Murray, E., Krahé, C., & Goodsman, D. (2018). Are medical students in prehospital care at risk of moral injury? *Emergency Medicine Journal*, *35*(10), 590–594. https://doi.org/10.1136/emermed-2017-207216

Papazoglou, K. (2017). The examination of different pathways leading towards police traumatization: 1730 Exploring the role of moral injury and personality in police compassion fatigue [Doctoral dissertation]. University of Toronto. Dissertation Abstracts International. https://www.proquest.com/openview/42f5062273f8ee95888467ea94370ebe/1?pq1733origsite=gscholar&cbl=18750

Riedel, P. L., Kreh, A., Kulcar, V., Lieber, A., & Juen, B. (2022). A scoping review of moral stressors, moral distress and moral injury in healthcare workers during COVID-19. *International Journal of Environmental Research and Public Health*, *19*(3), 1666. https://doi.org/10.3390/ijerph19031666

Ritter, M., Vance, M., & Iskander, J. (2023). Moral injury among US public health service first responders during the COVID-19 pandemic. *Public Health Reports*, *138*(5), 732–735. https://doi.org/10.1177/00333549231176294

Shay, J. (2010). *Achilles in Vietnam: Combat trauma and the undoing of character*. Simon and Schuster.

Shay, J. (2014). Moral injury. *Psychoanalytic Psychology*, *31*(2), 182–191. https://doi.org/10.1037/a0036090

Stanley, I. H., Hom, M. A., & Joiner, T. E. (2016). A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics. *Clinical Psychology Review*, *44*, 25–44. https://doi.org/10.1016/j.cpr.2015.12.002

Ter Heide, F. J. J., & Olff, M. (2023). Widening the scope: Defining and treating moral injury in diverse populations. *European journal of Psychotraumatology*, *14*(2), 2196899. https://doi.org/10.1080/20008066.2023.2196899

Thibodeau, P. S., Nash, A., Greenfield, J. C., & Bellamy, J. L. (2023). The association of moral injury and healthcare clinicians' wellbeing: A systematic review. *International Journal of Environmental Research and Public Health*, *20*(13), 6300. https://doi.org/10.3390/ijerph20136300

Watts, S., & Stenner, P. (2012). *Doing Q methodological research: Theory, method & interpretation*. SAGE.

Weber, M. C., Smith, A. J., Jones, R. T., Holmes, G. A., Johnson, A. L., Patrick, R. N., Alexander, M. D., Miyazaki, Y., Wright, H., Ehman, A. C., Langenecker, S. A., Benight, C. C., Pyne, J. M., Harris, J. I., Usset, T. J., Maguen, S., & Griffin, B. J. (2023). Moral injury and psychosocial functioning in health care workers during the COVID-19 pandemic.. *Psychological services*, *20*(1), 19–29. https://doi.org/10.1037/ser0000718

Williams, R. D., Brundage, J. A., & Williams, E. B. (2020). Moral Injury in Times of COVID-19. *Journal of Health Service Psychology*, *46*(2), 65–69. doi:10.1007/s42843-020-00011-4

Williamson, V., Lamb, D., Hotopf, M., Raine, R., Stevelink, S., Wessely, S., Docherty, M., Madan, I., Murphy, D., & Greenberg, N. (2023). Moral injury and psychological wellbeing in UK healthcare staff. *Journal of Mental Health*, *32*(5), 890–898. DOI: 10.1080/09638237.2023.2182414

Zasiekina, L., Duchyminska, T., Bifulco, A., & Bignardi, G. (2023). War trauma impacts in Ukrainian combat and civilian populations: Moral injury and associated mental health symptoms. *Military Psychology*, *36*(5), 555–566. https://doi.org/10.1080/08995605.2023.2235256