Centre for Work
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Development of a Bio-Psycho-Social-Spiritual framework for preventing stress in first responders

Technical Report

NSW GOVERNMENT

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Centre for Work Health and Safety

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Prepared by:

Mark Layson[1]

Abilio de Almeida Neto[2]

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[1] Charles Sturt University, Bathurst, NSW 2795

[2] Centre for Work Health and Safety, NSW Government, Sydney, NSW 2000

Executive summary

Background

In Australia 140,300 full-time first responders - Emergency Medical Services (EMS), Police, Ambulance, and Fire - work at the borderline of life and death, in high-risk environments and situations. First responders are also reported to be at a higher risk of serious harm from psychological workplace injuries compared to the general population. In fact, one in three first responders experience high or very high psychological distress compared to one in eight in all adults in Australia. During the COVID-19 pandemic, it has been further reported that first responders' rates of depression were ten times higher than the general population while rates of anxiety were four times higher. This comes at a great human cost to communities, and large financial cost to governments. Serious mental disorder claims among first responders account for 9.9% of all mental disorder related workers compensation claims in Australia, but account for 18.3% of the total cost of mental disorder payments. Consequently, every first responder organisation in the country has engaged multiple discipline wellbeing teams (MDWTs) to address this increased risk of psychological harm. However, despite the delivery of mental health interventions to first responders by MDWTs, the expected reductions of serious workers' compensation claims for mental disorder have not been observed.

Treatment and prevention of psychological distress among first responders

A review of the literature showed that current approaches utilised by MDWTs for the treatment and prevention of psychological harm experienced by first responders are based on the dominant biopsychosocial framework. Through a biopsychosocial lens, MDWTs typically deliver to first responders secondary and tertiary intervention strategies that target

individuals. The current strategies include clinical and therapeutic regimes that almost exclusively address posttraumatic stress disorder (PTSD) that is believed to arise from trauma exposure.

There is growing concern that there is an over-emphasis on trauma exposure as the cause of psychological harm whilst workplace stressors have been largely overlooked as a source of distress. A key point of concern is that interventions based on the biopsychosocial framework do not generally include matters of spirituality that have been found to better address psychological harm caused by moral suffering that consider both traumatic events and organisational stressors. Moral suffering arises when one's just world beliefs are breached by the actions of others or oneself and can lead to guilt, shame, outrage, suicidal behaviours and workplace deviance. Moral suffering has been extensively researched in military populations, while research in first responder contexts is in its infancy.

In addition, the clinical and therapeutic focus of current interventions neglects a work, health, and safety (WHS) lens which promotes true primary prevention strategies for psychological distress by identifying, assessing, and controlling psychological hazards. Not surprisingly, interventions based on the clinical and therapeutic biopsychosocial model have not reduced the incidence of distress to the degree that might have been expected. In summary, the main points revealed by the literature review were:

- lack of research around first responders and moral suffering, despite exponentially increasing research in the military context;
- over-emphasis by first responder wellbeing programs on the *content* of first responder work, namely trauma exposure, as the cause of distress;
- over-emphasis by wellbeing programs on individual focussed interventions at the expense of interventions that address organisational causes of distress;
- lack of attention to religious/spiritual (R/S) or existential struggles and their spiritual solutions due to the use of a limited biopsychosocial framework;
- lack of precision in identifying the kinds of events and cultures that can cause moral suffering in non-military contexts;
- lack of a WHS lens to produce truly primary prevention strategies based on psychological hazard, identification, assessment, and elimination.

Research aims

The purpose of this study was to empirically develop a framework to address the psychological distress that can arise in first responders from exposure to potentially morally injurious events (PMIEs). The primary research question was:

- *"What features can be incorporated into the current biopsychosocial model in order to address moral suffering and to create a biopsychosocial-spiritual model?"*

However, before answering the above question and creating a biopsychosocial model, researchers needed to ascertain that moral suffering is, indeed, a significant issue needing to be addressed among Australian first responders, which led to the followings secondary research questions:

- *"What is the extent to which Australian first responders are exposed and affected by moral suffering?"*
- *"How is reported moral suffering connected to spirituality?"*
- *"What are the types of moral suffering to which first responders are exposed?"*
- *"What is the impact on meaning-making and identity from events connected to moral suffering?*
- *"What types of organisational practices and cultures contribute to moral suffering?"*
- *"What do first responder organisations know about moral injury and moral suffering?"*
- *"How do first responder organisations see moral suffering fitting into their existing wellbeing practices?"*

To address the finding that matters of spirituality better address psychological harm caused by moral suffering the following research question was also included in the study:

"In what way does a theological perspective illuminate, interrogate, and suggest alternative ways of acting in response to the collected data?"

Method

To answer the above research questions, a mixed-method approach combining quantitative and qualitative approaches and Practical Theological Reflection (PTR) was employed:

1. Quantitative - Bayesian Network analysis of surveys from 229 Australian first responders was used to gain insight into the nature and extent of moral suffering among first responders and also into how *reported moral suffering is connected to spirituality.* To assess moral suffering three psychometric scales that measured "moral distress", "moral injury", and "perceived injustice" were administered;
2. Qualitative (part 1) - narrative analysis of 21 existing auto/biographies that detail the experiences of first responders was conducted to gain in-depth understanding of moral suffering among first responders and of how it is connected to spirituality;

3. Qualitative (part 2) - narrative analysis of semi-structured interviews with 16 authors of the auto/biographies was conducted to gain in-depth understanding of moral suffering among first responders; and
4. PTR - to gain insight into spiritual practices that may be useful in preventing any moral suffering identified in the qualitative and quantitative analyses.

Results

Quantitative analyses

Statistical analysis of survey responses from first responders was conducted to gain insight into the nature and extent of moral suffering among first responders and also into how reported moral suffering is connected to spirituality. The quantitative data revealed that moral suffering is present in first responders at moderate to high rates. A total of 85 first responders (37.12%) reported having felt betrayed by a manager, colleague, or systems/people in their organisations over 50 times during their careers. Those who reported higher levels of betrayal also reported higher levels of moral suffering.

The elements of all three scales (moral distress, moral injury, and perceived injustice) were reported to be moderate to high in all occupation groups of first responders. Importantly, of particular note from the quantitative study (survey results) was the consistent presence of perceptions of betrayal and attributions of blame in first responders. Indeed, cognitions of blame against individuals who believed to be responsible for their moral suffering were found to be high in the current study. For instance, police reported prevalence rates of clinically significant distress due to perceived injustice at rates equal to those with serious injuries from motor vehicle or industrial accidents. Therefore, moral suffering is a concept that must be considered in any program that aims to reduce psychological distress in first responders.

Further, the quantitative data showed a direct relationship between spirituality and moral suffering. When participants' religiosity or spirituality declined, it was associated with elevated levels of moral suffering, as measured by all three scales. Those who reported the lowest levels of moral suffering reported either stable or some growth in religiosity and/or spirituality (R/S). The experience of increased perceived injustice was the form of moral suffering most significantly associated with spiritual decline, while spiritual growth was associated with lower levels of perceived injustice.

Qualitative analyses

As mentioned above, qualitative analyses were conducted to gain in-depth understanding of moral suffering among first responders and of how it is connected to spirituality. The qualitative analysis found that moral suffering was evident in participants who experienced betrayal, leaving them feeling conflicted, detached from their own emotions and other people,

or feeling abandoned by leaders and organisations. It was also found that the rigorous selection and training of first responders can lead to the perception that they are strong or invulnerable to harm. However, due to the traumatic nature of their work, they have been found to have an *ironic vulnerability* to harm. In addition, qualitative results pointed to symptom manifestation among first responders that are consistent with moral injury, such as shame, anger, exhaustion, moral dissonance, sense of abandonment and betrayal, personal identity challenges, suicidality, substance abuse, and harm to personal relationships outside work.

The types of events most often described by qualitative research participants as causing harm included poor resourcing, work overload, trauma in vulnerable groups, lack of appropriate recognition, organisational injustice, and poor support from leaders. Such themes reported by first responders largely overlapped with psychosocial hazards identified in the workplace psychosocial hazard guidelines that were released by SafeWork NSW in 2022. However, moral suffering and psychosocial hazards have not generally been considered together for the purpose of reducing psychological harm in the workplace.

Practical theological reflection

Finally, a Practical Theology Reflection (PTR) was enacted on the sum of the data collected in the qualitative and quantitative methods above. The purpose of this theological reflection was to gain insight into spiritual practices that may be useful in preventing any moral suffering identified in the qualitative and quantitative data analyses. Based on the quantitative and qualitative analyses, the two important themes that were subject of the PTR were the nature and response to betrayal, i.e., response to experiencing an injustice at work or to witnessing one, and the need for supportive leadership within a secular spiritual framework. The main themes that arose from the PTR were:

- The need for forgiveness and restoration in the workplace
- The power of listening to employees
- The need for individuals to learn to examine their own behaviours
- Moral imagination (People are asked to “examine themselves” to take responsibility for their own character and asked to exercise one’s “moral imagination”)
- Enlarged thinking (People are encouraged not to jump to conclusions by “taking the log out of one’s own eye,” a common biblical concept that describes being aware of one’s own faults before casting judgement on others)
- Leadership of ironic vulnerability (Leaders must recognise the vulnerability of worker in first responder organisations who have a high trauma load)

- Addressing moral suffering through key leadership behaviours
    - Strong leadership that displays vision, authority, and sincerity,
    - A servant hearted, sacrificial attitude,
    - Filial and gracious physical presence with those they lead,
    - Two-way communication that values active listening, asking, and truth-telling,
    - The provision of physical and emotional needs of worker and facilitate pastoral care,
    - Protection of staff from harassment and organisational injustice,
    - Regular expression of gratitude to staff as enacted thankfulness,
    - Restoration and renewal of staff after wrongdoing, error, or conflict,
    - Continuing to be the follower of a higher authority.

Industry outreach activities

Also noteworthy, informal industry outreach was conducted to provide insight into first responder organisations' perception and willingness to adopt a biopsychosocial-spiritual model. Forty-five representatives of first responder organisations across Australia and internationally were consulted. Such consultations showed there was a lack of understanding about moral suffering and its role in psychological distress among first responder organisations. Not a single organisation had programs in place that addressed moral suffering. Consistent with the literature review findings, all organisations were primarily focused on the delivery of interventions to treat trauma exposure.

In addition, it was also found that psychological contracts that first responder organisations had with employees can be a source of tension and distress. For example, participants noted that many first responder recruitment campaigns present implicit promises of adventure and excitement where workers do something "worthwhile." However, when work is regularly mundane or apparently meaningless it can have a negative impact on the perception of the organisation by workers.

Finally, during consultations participants expressed concerns about the lack of unity among different professional groups that compose MDWTs. Rivalry among professional groups appeared to be the rule rather than an exception.

Discussion

The current study investigated the adoption of a BPSS framework to prevent moral suffering among first responders. Results from quantitative and qualitative analyses showed that a BPSS framework can assist first responder organisations to meet their obligations to control

psychosocial hazards. A BPSS framework provides a vital bridge between moral suffering and psychosocial hazard reduction, as it provides the basis for the delivery of intervention strategies for preventing psychologically and spiritually harmful behaviour in the workplace.

Moreover, the good news is that organisational, clinical, and pastoral responses to moral suffering can potentially be enhanced by the elimination of the events identified in the current study that can be perceived as betrayal. Therefore, based on a BPSS framework, first responder organisations may profit from a set of truly holistic intervention strategies aimed at eliminating such events.

The moral suffering identified in the current study in the form of blame cognitions and sense of organisational betrayal often led to feelings of anger and even a desire for revenge that must be addressed through intervention strategies if a mentally healthy workplace is to be created. Intervention strategies that help to alter the individual's perceptions of betrayal and lead to the possibility of forgiveness and reconciliation are important in the creation of such a mentally healthy workplace, as they address maladaptive anger and retribution. That is, intervention strategies(in accordance with the findings from the PTR) that take into account moral suffering and the spiritual element that is used to prevent and treat it. No doubt, effective implementation of such intervention strategies may assist in preventing counterproductive workplace behaviours, such as absenteeism, risk taking, and inappropriate or criminal behaviour that arise as acts of revenge for perceived injustices. Indeed, the observation that poor organisational citizenship can be motivated by the desire to seek revenge for betrayal means that addressing spirituality and moral suffering through intervention strategies based on the findings from the PTR will bring benefits for first responder organisations by potentially reducing motivation for misconduct.

Indeed, the PTR indicates that the spiritually based intervention strategies can create practical and spiritually grounded cultures and practices potentially capable of eliminating the reported psychological harmful PMIEs thereby preventing moral suffering. Given that many of the causes of moral suffering include modifiable organisational or leadership practices, this BPSS model proposes 4 preventative interventions that potentially eliminate harmful betrayals that directly minimise the impact of blame cognitions reported in the current study. Figure 1 summarises the reported causes of moral suffering (green circles) and the fourfold interventions (orange boxes) of the BPSS framework.

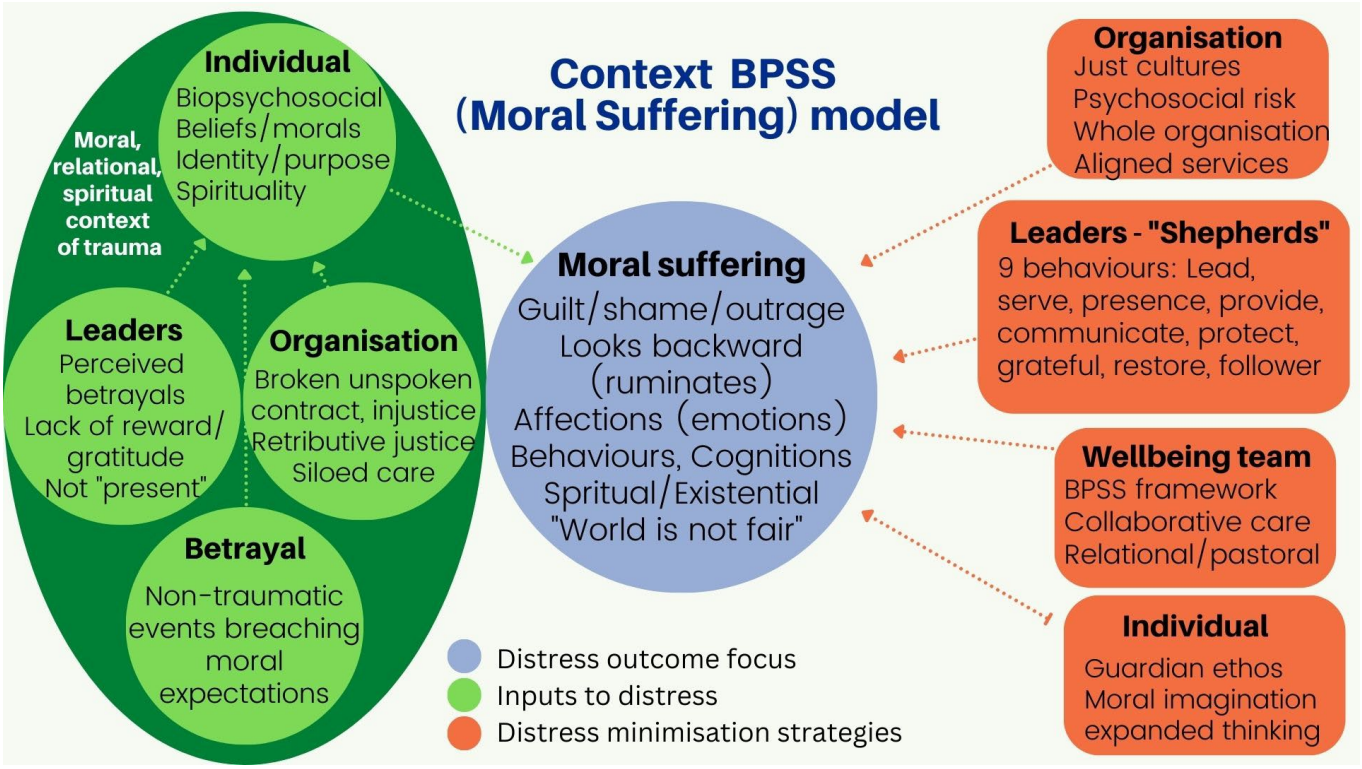

Figure 1. Conceptual model of the BPSS framework.

Conclusion

The findings of this research highlight the experiential and existential dimensions of moral suffering that occurs in first responders and how to prevent it. Future research may be able to test and refine the elements of this model for use in different cultural and organisational settings. Addressing the organisational factors that contribute to distress may produce a healthier and more cost-efficient workplace in the high-risk community of first responders. Additionally, the BPSS framework will help organisations meet their requirements under emerging psychosocial safety legislation.

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First Responder	This is used in place of other terms such as Public Safety Personnel, or Emergency Worker. In the current research it encompassed police, fire, ambulance, and Emergency Medical Services (EMS) such as emergency and intensive care medicine practitioners.
Moral	Derived from the definition expounded by Litz et al. (2009, p. 699), morals are "…the personally held fundamental assumptions about how things should work and how one should behave in the world. They are formed intuitively in the context shared familial, cultural, societal, religious, and legal rules for social behaviour and are often held tacitly. Their content transcends explicit or institutional codes of practice, and while often overlapping, can be dissonant from explicitly stated organisational ethical frameworks."
Moral distress	When one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action (Jameton, 1984, p. 6).
Moral injury	A trauma-related syndrome caused by the physical, psychological, social and spiritual impact of grievous moral transgressions, or violations, of an individual's deeply held moral beliefs and/or ethical standards due to: (i) an individual perpetrating, failing to prevent, bearing witness to, or learning about inhumane acts which result in the pain, suffering or death of others, and which fundamentally challenges the moral integrity of an individual, organisation or community, and/or (ii) the subsequent experience and feelings of utter betrayal of what is right caused by trusted individuals who hold legitimate authority (Australian Defense Force, 2021).
Moral suffering	A common name that encapsulates the diversity of morally fracturing experiences that negatively impact first responders (Braxton et al., 2021). Moral suffering may include concepts such moral injury, moral distress, and perceived injustice.
Multiple discipline wellbeing team (MDWT)	A team of volunteers or employed personnel who each bring expertise from different disciplines and/or lived experience to collaborate in achieving a common goal of protecting and improving the overlapping aspects of staff wellbeing. MDWTs regularly contain, but are not limited to

	disciplines such as, chaplains, health coaches, peer supporters, psychologists, social workers, recovery specialists, and even therapy dogs.
Perceived injustice	When an individual is exposed to situations that are characterized by a violation of basic human rights, transgression of status or rank, or challenge to equity norms and just world beliefs. The experience of unnecessary suffering as a result of another's actions, or the experience of irreparable loss (Sullivan et al., 2008, p. 250).
Primary prevention	"Addressing the workplace factors that are risks of psychological injury and promoting protective factors (e.g. enhancing leadership capability, increasing job control, enhancing organisational justice, building an environment of positive social and emotional wellbeing)" (Beyond Blue Ltd., 2015, p. 15).
Spirituality	"Spirituality is a dynamic and intrinsic aspect of humanity through which persons seek ultimate meaning, purpose and transcendence, and experience relationship to self, family, others, community, society, nature, and the significant or sacred. Spirituality is expressed through beliefs, values, traditions, and practices" (my emphasis) (Puchalski et al., 2014, p. 646). In context of the Biopsychosocial-Spiritual (BPSS) framework, it is based on the premise that healthy spirituality is not merely practices such as prayer or yoga but is expressed through practical and benevolent expression of beliefs and values.
Trauma	Traumatic events are ones that "involved death or threatened death, actual or threatened serious injury, or threatened sexual violation" (American Psychiatric Association, 2013).

Abbreviations

BPSS: Biopsychosocial-Spiritual

EMIS: Expressions of Moral Injury Scale

EMS: Emergency Medical Services

HCW: Health Care Worker

IEQ: Injustice Experience Questionnaire

MDT: Moral Distress Thermometer

MDWT: Multiple Discipline Wellbeing Team

MI: Moral Injury

NOI: Narrative Oriented Inquiry

PMIE: Potentially Morally Injurious Events

PTR: Practical Theological Reflection

PTSD: Posttraumatic Stress Disorder

R/S: Religious/Spiritual

WHS: Work Health and Safety

Introduction

The commencement of this research led initially to a literature review to understand the extent and nature of psychological distress in Australian first responders. This involved quantifying levels of distress that are reported in first responders, reviewing the adequacy of the currently used framework to treat and prevent psychological distress in first responders, and consideration of moral suffering as a novel way to understand how distress forms.

Psychological distress in the first responder population

In Australia, approximately 140,300 full time first responders work at the borderline of life and death, in high-risk environments[1]. Not surprisingly, first responders are reported to be at a high risk of serious psychological harm, with one in three first responders experiencing high or very high levels of psychological distress compared to one in eight in the adult population (Beyond Blue Ltd., 2018). Moreover, during the COVID-19 pandemic, first responders presented rates of depression ten times higher compared to the general population and rates of anxiety four times higher (Roberts et al., 2021).

Not only is this costly on a human level, but the financial cost of worker's compensation for first responders is also disproportionately high. Safe Work Australia reported that between 2011 and 2016 first responders' claims represented 9.9% of all serious workplace mental disorder claims in Australia. In addition, first responder mental disorder claims lead to an average claim payment of $49,600 and 26.4 weeks off work compared to $26,800 in payments and 15 weeks off work for all other serious mental health claims (Safe Work Australia, 2018). This means that the 9.9% of serious mental health claims from first responders make up 18.3% of the total cost of mental disorder claims in Australia, and while these claims consist of only 0.6% of all worker's compensation payments, they account for 2.8% of all claim payments.

Statistics such as these have prompted first responder organisations to engage specialised professionals and develop "multiple discipline wellbeing teams" (MDWTs) to deliver interventions that address the mental health of their staff. In Australia, MDWTs typically consists of chaplains, health coaches, peer supporters, psychologists, social workers, therapy dogs, and more (Lawn et al., 2019).

Current approach to treating psychological distress in first responders

Current approaches utilised by MDWTs for the treatment and prevention of psychological harm experienced by first responders are based on the dominant biopsychosocial framework

[1] *The figure of 140,000 was calculated from government and industry websites.*

(Bernstein et al., 2017; Engel, 1977; Van Denend et al., 2022). The biopsychosocial framework "integrates useful aspects of both medical and social models of disability, addressing biological, individual, and societal perspectives on health" (Marini & Stebnicki, 2012, p. 408). That is, the model recognises the biological, psychological, and social aspects of disease rehabilitation.

Through a biopsychosocial lens, first responder MDWTs typically deliver individual-focused clinical and therapeutic interventions that almost exclusively address posttraumatic stress disorder (PTSD) that is believed to arise from trauma exposure. These interventions include mindfulness, resilience training, reactive post-incident interventions, wellness check-ins, and therapeutic regimens (Carleton et al., 2020; McCreary, 2019). Such interventions are broadly considered as primary prevention strategies; however, they are designed to prevent the development of mental ill health and not to eliminate trauma exposure as a hazard (McCreary, 2019).

The interventions above are the equivalent of providing psychological personal protective equipment (PPE), which is the lowest on the hierarchy of controls for workplace hazards (SafeWork NSW, 2019). It is perhaps then unsurprising that the current primary prevention strategies for trauma exposure have not been shown to effectively prevent harm from trauma exposure that may lead to PTSD (Skeffington et al., 2013; Skeffington et al., 2016).

Therefore, the model employed by MDWTs that has an almost exclusive focus on trauma exposure as the cause of psychological harm in first responders is problematic. A submission to a recent review of an Australian first responder organisation suggests that organisational stressors play an important role in distress by saying, "Speaking with colleagues and people who've left the organisation and long-term paramedics, the most stressful aspect of being a Paramedic is dealing with the organisation" (Victorian Equal Opportunity & Human Rights Commission, 2021, p. 255). There is increasing awareness that distress arises less from trauma exposure in isolation, and more from morally challenging events within the organisation that may lead to moral/spiritual/existential suffering (Blumberg et al., 2020, 2022; Carleton et al., 2020; Duran et al., 2019; Purba & Demou, 2019). That is, the current biopsychosocial framework, with its strong focus on trauma exposure, largely overlooks the impact of organisational stressors as a preventable cause of distress and the underlying moral/spiritual factors.

A key point of concern is that interventions based on the biopsychosocial framework do not generally include matters of spirituality that have been found to better address psychological harm caused by moral suffering (Best et al., 2016; Carey & Hodgson, 2018; Smith-MacDonald

et al., 2018; Sulmasy, 2002). In addition, the clinical and therapeutic focus of current interventions neglects a work, health, and safety (WHS) lens which promotes true primary prevention strategies for distress by identifying, assessing, and eliminating psychosocial hazards. Not surprisingly, interventions based on the clinical and therapeutic biopsychosocial model have not reduced the incidence of distress to the degree that might have been expected (Australian Senate Education and Employment References Committee, 2019; Burkman et al., 2019; Gladstone, 2022; Simington, 2018).

In summary, the literature review reported several gaps in the research in relation to moral suffering, namely:

- lack of research around first responders and moral suffering, despite exponentially increasing research in the military contexts;
- over-emphasis on the *content* of first responder work, namely trauma exposure, as the cause of psychological distress within first responder wellbeing programs;
- over-emphasis on individual focussed interventions at the expense of interventions that address organisational causes of psychological distress;
- lack of attention to religious/spiritual (R/S) or existential struggles and their spiritual solutions due to the use of a limited biopsychosocial framework;
- lack of precision in identifying the kinds of events and cultures that can cause moral suffering in non-military contexts;
- lack of a WHS lens to produce truly primary prevention strategies based on the identification, assessment and elimination of psychosocial hazards in the workplace.

Moral Suffering

The moral suffering alluded to above is an umbrella term that encapsulates the diversity of morally fracturing experiences that negatively impact first responders (Braxton et al., 2021; Papazoglou & Chopko, 2017). Under this umbrella term are conceptual models such as moral distress (Jameton, 1984; Thomas & McCullough, 2015), perceived injustice (Sullivan et al., 2008), and the more commonly researched moral injury (MI) model (Litz et al., 2009; Shay, 2012). Moral suffering occurs when a person feels betrayed by others, feels compelled to perform duties contrary to their moral framework, or is morally compromised through their own acts or omissions (Borhani et al., 2015; Jamieson et al., 2020; Litz et al., 2009; Shay, 1994). Unlike PTSD in the biopsychosocial framework, the nascent concept of moral suffering does explore the impact from either acting outside of one's own moral framework, or a perception of being betrayed by a leader, organisation, or colleague.

The kind of events just described have been conceptualised as being potentially morally injurious events (PMIEs) (Phelps et al., 2015). It is acknowledged that PMIEs can have a profound impact on workers' identity, meaning, purpose, and just world beliefs that can have negative psychological, social, spiritual, and behavioural sequalae (Baker, 2020; Litz et al., 2009; Yakobov & Sullivan, 2018). However, the exact nature of events considered as PMIEs is a matter of debate. Research shows that exposure to PMIEs in the workplace, that can be so detrimental to one's mental health, is best treated by a holistic approach that includes the spiritual element (Borges et al., 2022; Smith-MacDonald et al., 2018).

There is yet no consensus definition of any of the moral models of suffering, however, there is wide recognition that they incorporate at least two factors. The Australian Defence Force (ADF) definition of MI details the two factors, namely self-focused and other-focused causes of suffering. These elements, which the ADF recognises has spiritual impacts, are included respectively at (i) and (ii) in the ADF definition of MI:

> *Moral injury is a trauma-related syndrome caused by the physical, psychological, social and spiritual impact of grievous moral transgressions, or violations, of an individual's deeply held moral beliefs and/or ethical standards due to: (i) an individual perpetrating, failing to prevent, bearing witness to, or learning about inhumane acts which result in the pain, suffering or death of others, and which fundamentally challenges the moral integrity of an individual, organisation or community, and/or (ii) the subsequent experience and feelings of utter betrayal of what is right caused by trusted individuals who hold legitimate authority (Australian Defence Force, 2021).*

While there is a conceptual overlap between PTSD and MI, they differ in brain actuation (Barnes et al., 2019), symptomology (Jinkerson, 2016), and causation (Shay, 2012). Recent

Australian research studies have provided helpful and clear distinctions between MI and PTSD symptoms. Figure 2 shows the overlapping symptomology of MI and PTSD, while Table 1 categorises such symptoms into a MI framework that considers the spiritual element that is largely missing in the biopsychosocial framework. It must also be noted that spirituality has historically inferred adherence to a particular religion. However, recent research shows that it is an often-ignored aspect of human functioning that is not necessarily related to religiosity, but it is intimately connected with a person's moral expectations and identity along with all aspects of health more generally (Currier et al., 2020; Davies, 2020; Dhar et al., 2013; Puchalski et al., 2014; Spiritual Health Association, 2021; World Health Organization, 1998).

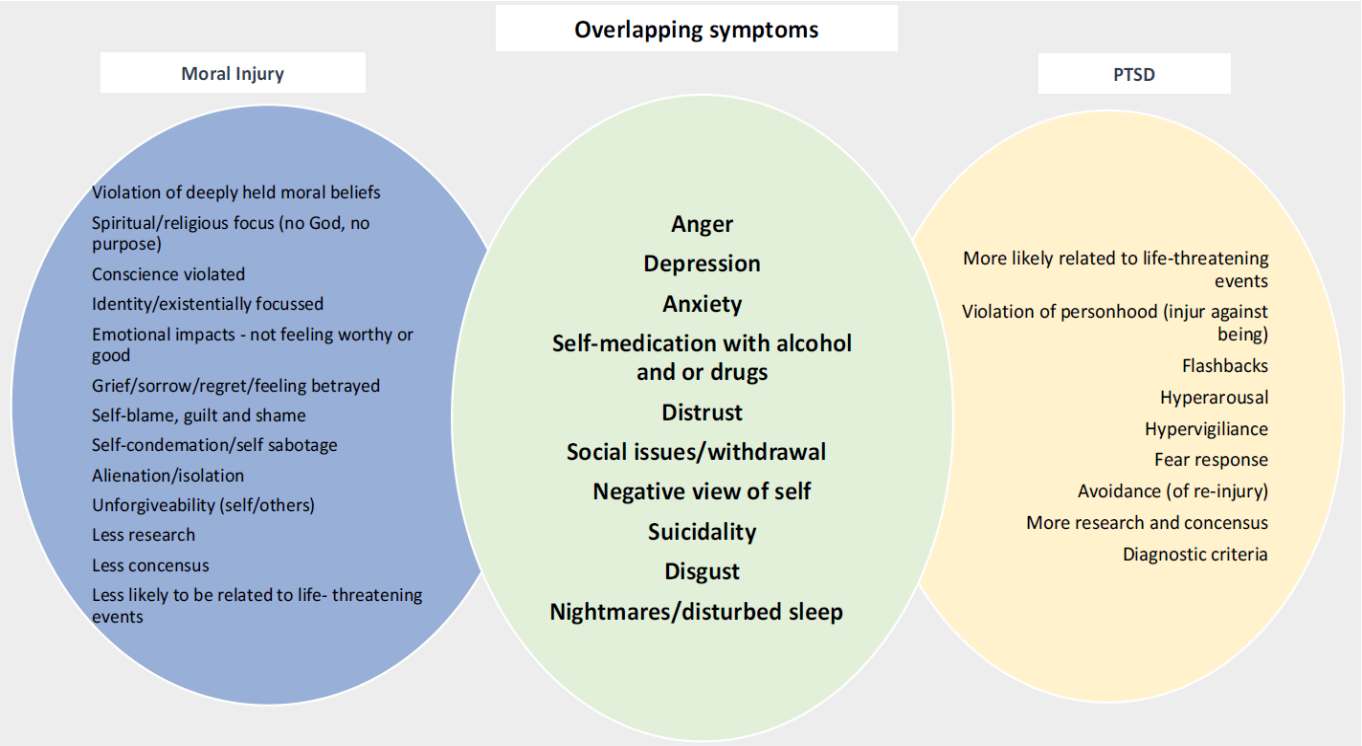

*Figure 2. Differentiating moral injury from PTSD**

**Source: (Jamieson et al., 2020) used with permission*

Table 1. Symptoms of psychological distress within a moral injury framework*

Biological/physical injury	*Psychological/emotional injury*	*Social/familial injury*	*Spiritual injury*
Insomnia	*Anger & Betrayal*	*Spousal/Partner Disconnection*	*Anger & Betrayal*
"Startle-reflex"	*Shame, Guilt, Sorrow*	*Child-Parent Disconnection*	*Shame, Guilt, Sorrow*
Alcohol abuse	*Loss of trust in self*	*Family Disconnection*	*Loss of trust in self*
Drug addiction	*Loss of trust in others*	*Collegial Disconnection*	*Loss of trust in others*
Loss of memory	*Fear and Anxiety*	*Occupational dysfunction*	*Loss of faith/ belief*
Self-sabotage /	*Re-experiencing the moral conflict/Flashbacks*	*Professional Disconnection*	*Moral pain /dissonance*
Self-harm	*Nightmares*	*Legal and disciplinary issues*	*Questioning morality*
Suicide	*Gambling addition*	*Community/Cultural Disconnection*	*Self-condemnation*
	Sexual/Porn Addiction	*Social Alienation*	*Spiritual/existential crisis*
	Self-deprecation		*Loss of purpose in life*
	Loss of self-worth		*Fatalism*
	Depression		*Loss of caring*
	Suicidal ideation		*Ontological loss of meaning*

**Source: (Carey & Hodgson, 2018, p. 3)*

Also noteworthy, a moral/spiritual approach to suffering, that is central to MI, has arisen in the military that accepts this difference between PTSD and MI and proposes to deliver treatment to military personnel accordingly. That is, in military settings moral suffering is increasingly being accepted as best treated by addressing spiritual themes through interdisciplinary collaboration of psychologists and spiritual carers such as chaplains (Cenkner et al., 2020; Usset et al., 2020). This recognition of moral suffering in the military is driven by the conviction that, 'Veterans can usually recover from horror, fear, and grief once they return to civilian life, so long as "what's right" has not also been violated.' (Shay, 1994, p. 20). This is another way of saying personnel can recover from traumatic *content* if the moral *context* is reliable.

Unlike PTSD, since Shay's seminal work that first coined the phrase "moral injury" in 1994, the perception of betrayal and injustice has been central to moral suffering. Furthermore, moral suffering has been recognised to lead to the "undoing of character" in the betrayed person (Shay, 1994). A downward spiral of character and actions can manifest in unethical behaviour and vengeance seeking through higher levels of absenteeism, to acts of workplace deviance, and up to the committing of atrocities (Bandura, 1999; Bordia et al., 2008; De-Cremer, 2006;

Gilmartin, 2014; Hodgson et al., 2022; Hystad et al., 2014). The observation that poor organisational citizenship can be motivated by the desire to seek revenge for betrayal means that addressing spirituality and moral suffering will have many organisational benefits (Giacalone & Jurkiewicz, 2010).

However, outside the military, very limited research has been conducted in the treatment of moral suffering and, to our knowledge, no research has been conducted in the prevention of moral suffering in a non-military context (Lentz et al., 2021). This lack of preventive action and the non-awareness of the potentially psychologically and spiritually harmful impact of exposure to PMIEs has broader implications to policymakers and workers. For instance, there is opportunity to include aspects of moral suffering to recently released guidelines for preventing and addressing psychosocial risk in the workplace (SafeWork NSW, 2021).

That is, such guidelines could be enhanced by adopting spiritually informed mitigation strategies to prevent psychological distress. For instance, proposed interventions to be delivered would include adapted resilience training through the exercise of moral imagination which is a moral reflective practice (Blumberg et al., 2022; Cameron, 2011; Cameron et al., 2020; Hodgson et al., 2022; Rushton, 2016); enlarged thinking that involves understanding the actions of others (Volf, 2019); humility, forgiveness (Griffin et al., 2020); gratitude, loving kindness, and servant leadership (Zhang et al., 2020).

Towards a biopsychosocial-spiritual model

In summary, the current biopsychosocial framework of dealing with psychological distress in the first responder population does not adequately address psychological and spiritual distress caused by moral suffering. Because recognition of moral suffering was found to be largely restricted to military settings, an approach that prevents moral suffering in first responders, and other civilian populations needs to be developed. In addition, it is also noted that current approach to addressing psychological distress focusses on individual-level interventions solely (Blumberg et al., 2022). Therefore, in line with an increasing volume of recommendations, there is also a need to adopt the concurrent delivery of organizational-level interventions (National Safety Council, 2020; Szoke AO & Allen + Clarke Consulting, 2022; World Health Organization, 2022).

The current study uses the concept of moral suffering as the target to be addressed through a biopsychosocial-spiritual (BPSS) model to better prevent the psychological harm that can be caused by first responders' exposure to PMIEs. Since gaps were identified in the literature pertaining to primary prevention and organizational-level interventions in relation to moral suffering, the current study will consider both organisational-level and individual-level R/S

informed interventions to be delivered within a primary prevention framework. That is, the current study added a moral suffering dimension to the current biopsychosocial framework that is used to treat and prevent psychological distress. A BPSS framework was developed to consider the spiritual, moral, and relational dimensions of psychological distress among first responders. Also, bearing in mind the need for such an approach to moral suffering outside the military, the BPSS model developed in the current study is also transferrable to other civilian workplaces where MI is increasingly being considered (Fani et al., 2021; Thomas et al., 2021).

Research questions

As presented above, the initial literature review established the high rates of psychological distress in first responders and the limited success of the current biopsychosocial model in the treatment and prevention of psychological distress arising from moral suffering. These findings cemented the need for the development of a biopsychosocial-spiritual model. Therefore, the purpose of this study was to empirically develop a framework to address the psychological distress that can arise in first responders from exposure to PMIEs. The basic research question was:

"What features can be incorporated into the current biopsychosocial model in order to address moral suffering and to create a biopsychosocial-spiritual model?"

However, before answering the above question and creating a biopsychosocial model, researchers needed to ascertain that moral suffering is, indeed, a significant issue needing to be addressed among Australian first responders. That is, moral suffering in Australian first responders needed to be quantified. This led to further research questions:

"What is the extent to which first responders are exposed and affected by moral suffering?"

"How are reported moral suffering connect to spirituality?"

Also, to be able to incorporate the appropriate elements of moral models of suffering into a working BPSS framework, researchers also needed to gain an insight into the types of PMIEs first responders are exposed and also into the impact of the ensuing suffering. The need for such insights led to further research questions:

"What are the types of moral suffering first responders are exposed?"

"What is the impact on meaning making and identity from events connected to moral suffering?

"What types of organisational practices and cultures contribute to moral suffering?"

Since the initial review of the relevant literature also revealed a need for organisational-level interventions to prevent moral suffering in first responders, insight also needed to be gained regarding first responder organisations' perception and willingness to adopt a BPSS model. Such insight would inform strategies for implementation of the BPSS. The need for such insight led to following research questions:

"What do first responder organisations know about moral injury and moral suffering?"

"How do first responder organisations see moral suffering fitting into their existing wellbeing practices?"

In order to explore targeted intervention strategies that are spiritually informed one final question was:

"In what way does a theological perspective illuminate, interrogate, and suggest alternative ways of acting in response to the collected data?"

Method

Human ethics

The Human Research Ethics Committee of Charles Sturt University gave approval for this research under protocol number H20260.

Overview of mixed-method approach

To answer the research questions, a mixed-method approach combining quantitative and qualitative analysis, as well as Practical Theological Reflection (PTR) was employed. These approaches are described below. A total of three groups of first responders took part in the research: Group 1 was composed of survey participants (it excluded authors who participated in the survey); Group 2b was composed of 16 authors who were interviewed and also participated in the survey; and Group 2a composed of 21 biographies used for narrative analysis (Figure 3). The group of authors who were also survey participants was treated as a separate group to general survey participants for the purpose of comparisons. That is, to ascertain whether or not the group of authors was representative of the group of general survey participants.

Figure 3. Graphic display of research participants broken into research methodologies.

Note: All of group 2a were invited to participate in an interview and survey, of which 16 consented and became group 2b

Quantitative Methods

Materials

The purpose of the quantitative component (in the form of a survey) of the study was to assess the validity of moral suffering in first responders and to quantify the extent to which first responders are exposed and affected by moral suffering. A 27-item on-line questionnaire) was used composed of four sections (see Appendix 2 for details):

1. Demographic variables, such as age, gender, length of service, and type of first responder role such as police, fire, ambulance, etc.,
2. Measurements related to religiosity, spirituality, and faith of the participant,
3. Perceived level of exposure to trauma, morally challenging situations, and betrayal,
4. The final section measured moral suffering via three validated scales that adapted the wording from the original context (e.g., military) to the first responder context. All adaptations were approved in writing by the creators of the scales. The scales were:

- Expressions of Moral Injury Scale-military version (EMIS-M) (Currier et al., 2018),
- Moral Distress Thermometer (MDT) (Wocial & Weaver, 2013),
- Injustice Experience Questionnaire (IEQ) (Sullivan et al., 2008).

The Moral Distress Thermometer was administered twice, as the original scale requires respondents to temporally locate their distress level to the two-week period preceding and the administration of the scale. This differed from the other scales that did not ask participants to locate their distress over the last two weeks. In order to increase alignment with the other scales the MDT was administered a second time to assess the respondent's distress over their career.

The final survey was administered online using SurveyMonkey™ and managed through Charles Sturt University Spatial Data Analysis Network (SPAN).

Recruitment

All occupation types of first responders (police, ambulance, fire brigade, and emergency medical services) were recruited to participate in the survey between March and December 2021. An invitation to participate in the survey was extended to Australian first responders electronically, through social media network and professional organisations. The first responders invited to participate were from police, ambulance service, fire brigade, and emergency medical services. All participants were required to read a consent statement in the questionnaire, and they all stated they consented to be part of the survey (Appendix 2). Those who agreed to participate formed Group 1. Additionally, all 24 subjects of the auto/biographies (Group 2b) were invited to participate in the survey as well as an interview although only 16

accepted such invitation. They were invited to participate via existing social networks, or through internet searches for contact details.

Participants

In response to the general invitation, 287 Australian first responders accepted the invitation to complete the online survey questionnaire. However, fifty-eight of these participants failed to complete at least one of the validated scales and were removed from the data set before analysis leaving *n* = 229 records for analysis. Sixteen (16) members of Group 2a agreed to participate in the survey and interview and formed Group 2b. Table 2 below reports the number of participants in Group 1, and Group 2a. Occupation groupings for Group 2b are not reported in order to protect their anonymity, as the sample is too small.

Table 2. Occupations of participants and Australian first responder workforce.

	FTE Australia	*Group 1 survey*	*Group 2a (biographies)*
Police *n =*	*65000*	*97*	*10*
%	*46.3*	*37.2*	*41.7*
Ambulance *n =*	*21492*	*120*	*9*
%	*15.3*	*46.0*	*37.5*
Fire *n =*	*15729*	*27*	*2*
%	*11.2*	*10.3*	*8.3*
EMS *n =*	*38,080*	*17*	*3*
%	*27.1*	*6.5*	*12.5*

Statistical analysis

The data was converted into Microsoft Excel spreadsheets for cleaning, and then uploaded into the Netica version 6.09 for statistical analysis (Norsys Software Corporation, 2022). A Bayesian Network (BN) approach was chosen as the primary framework for statistical data analysis because of its ability to analyse complex interactions between research variables (Kjærulff & Madsen, 2008; Pearl, 1988). BN was first created to model artificial intelligence and has recently been helpfully used in the analysis the complex connections between PTSD, MI, PMIE exposure and depression (Levi-Belz, Greene, et al., 2020). In the current research BN allowed for the analysis of complex interactions between research variables to assess the validity of moral suffering by exploring associations related to exposure to PMIEs and trauma, spirituality, and levels of distress measured by the three scales.

Statistical inference that is produced via BN models are not the same as the more traditional regression models that produce a null hypothesis significance test (NHST). BN, unlike NHST, does not make a dualistic decision of relationships being statistically 'non-significant' or 'significant'. While NHST has become the standard statistical method, it is not without its critics because of a broad range of abuses (Ziliak & McCloskey, 2008). Contemporary calls have even been made by the American Statistical Association, that statistical significance

tests should be abandoned in their entirety (Wasserstein et al., 2019). Instead, Wasserstein and colleagues recommend a model that is accepting of uncertainty, thoughtful, open, and modest. To fill this prescription, BN models involve updating, sharpening, refining beliefs, and using *a priori* 'background knowledge' to aid in the model's estimation (Tarka, 2018). Bayes theorem, which defines the interrelationship between the marginal probability, the conditional probability, and the joint probability of two random variables, is the theoretical foundation that underpins the BN approach. The mathematical expression of Bayes theorem is given by the following formula,

$$\Pr(B|A) = \frac{\Pr(A|B)\Pr(B)}{\Pr(A)} = \frac{\Pr(A,\ B)}{\Pr(A)}$$

Together with the chain rule of probabilities, a BN model produces a directed acyclic graph (DAG) as a graphical representation of the joint probability distribution of all variables included in the model. The DAG for Group 1 is shown as Figure 4. In a BN model, the variables are represented as nodes and the links between variables represent the dependency relationships of the connected variables (Kjærulff, 2013; Korb & Nicholson, 2011). Every BN model has two components in its model specification. The qualitative component of a BN specifies the network structure by connecting all the variables/nodes in the model; the quantitative component of a BN determines the conditional probability tables (namely, evaluating the parameters of a BN model) which quantifies the strengths of dependence relations using probability theory (Kjaerulff & Madsen, 2013; Korb & Nicholson, 2010; Norsys Software Corporation, 2022). The DAG shows each variable being represented by a "node" as a box that has several discrete "conditions" that represent the responses of participants. The machine learning process creates arrows to indicate dependent relationships between nodes. The BN model here is a joint probability distribution of all variables in the model and serves as a suitable approach to produce valid statistical inferential analysis results.

Having recognised the pitfalls of NHST, significance testing was completed for several of the data outputs. Correlations between scales and their significance and confidence intervals were calculated in the statistic program SPPS 27, while other significance levels were calculated in Excel in line with recognised protocols (Behrens-Fisher problem, 2006).

Qualitative Methods

Part 1: Analysis of auto/biographies that detail the experiences of first responders

The purpose of the analysis of auto/biographies was to gain insight into the types of moral suffering first responders are exposed to and also to gain insight into the causes of such suffering.

Materials

Twenty-one auto/biographies (books) detailing the experiences of 24 Australian first responders were utilised. One book was written by a former first responder that gave an account of three paramedics and his own journey as a first responder. All books for analysis were of Australian first responders and written since the year 2000. A comparison of the proportion of the different occupations who took part in the research is found in Table 2, while Appendix 1 lists all the works used.

Data analysis

The aim of this phase of the research was to explore the stories told by first responders in their auto/biographies about their experiences. The data analysis technique utilised Hiles et al. (2017) model of 'Narrative Oriented Inquiry' (NOI) which is grounded in the principles of narrative psychology (Hiles & Cermák, 2008). This involved breaking the narrative down into blocks of text, prior to employing different interpretive methods and applying these to the text. The analysis continuously asked the study's relevant research questions to gain insight into exposure to PMIEs and their impact on psychological health.

Part 2: Semi-structured interviews with the authors of the above auto/biographies

An interview plan was constructed comprised of preliminary questions in line with the relevant research questions: a) "What is the extent to which first responders are exposed and affected by these types of moral suffering?"; b) "What are the types of moral suffering first responders are exposed?"; c) "How are reported moral suffering connect to spirituality?"; and d) "What types of organisational practices and cultures contribute to moral suffering?"

Recruitment

Authors from Group 2a were invited to participate via existing social networks, or via internet searches that were conducted to locate the contact details for each of the twenty-four subjects of the auto/biographies. Consent forms and participant information sheets were sent via email once they had been contacted, and then arrangements to conduct the interview were made via phone or email. The researcher explained the purpose of the study and the interviews and for those that were amenable to being interviewed.

Participants

Sixteen of the twenty-four authors/subjects of the auto/biographies in Group 2a consented to be interviewed and complete surveys to become Group 2b.

Data analysis

The NOI methodology was also used in analysing the interviews. Engaging with participants for two qualitative approaches (books and interviews) meant that as each of their experience was retold and re-understood in narrative form the knowledge gained depth of expression and understanding. All interviews were transcribed verbatim and entered into NVivo 12 program for analysis (QSR International Pty Ltd., 2022).

Practical Theological Reflection

Finally, a Practical Theology Reflection (PTR) was enacted on the sum of the data collected in the qualitative and quantitative methods above. The purpose of this theological reflection was to gain insight into spiritual practices that may be useful in preventing any moral suffering identified in the qualitative and quantitative data analyses.

Material

Findings from the qualitative and quantitative analyses became the basis for the PTR.

Data analysis

PTR involves a rigorous and methodical exploration of the collected data to discover how a theological perspective may illuminate, interrogate, and suggest alternative ways of acting in response to the data reflected upon (Thompson, 2019, p. 28). For instance, once causes of moral suffering are uncovered, ways of conducting oneself documented in religious scriptures are explored as an alternative to the behaviour causing moral suffering. This reflection is done in conversation with current psychological research.

An advantage of PTR is that while it is often used within a Christian tradition it can be applied by any philosophical or faith tradition. Moreover, the findings from PTR rely on ancient wisdom that is already broadly, often unknowingly, applied for the common good (Van Tongeren et al., 2021). Additionally, wisdom from diverse philosophical and religious traditions are already utilised in secular organisations and do not require one to adhere fully to the beliefs that generated it, such as mindfulness practices (Koenig et al., 2022).

Results

Quantitative Results

All survey participants had previously served or were currently serving in first responder organisations in Australia. As alluded to before, survey data from the group composed of the 16 authors was not utilised in the following statistical analyses for the purposes of determining associations between variables due to its low number of participants rendering it underpowered for statistical analysis. Therefore, the reported statistical analyses utilised data from the group of 229 general first responders excepted for the purpose of comparison with the authors' group.

Although the authors' group was small (n = 16), comparisons with the larger group of non-authors (n = 229) was important to establish whether or not the narrative analysis of auto/biographies and interviews were based on a representative sample. It could be argued that the experiences of the subjects of these books are not representative of first responders because they needed to be more extreme to warrant publishing. Comparison data allows for the assessment of the representativeness of the qualitative analysis.

As mentioned above, Bayesian Network (BN) approach was chosen as the primary framework for statistical data analysis because of its ability to analyse complex interactions between research variables (Kjærulff & Madsen, 2008; Pearl, 1988). Figure 4 displays the Directed Acyclic Graph (DAG) created from the survey results pertaining to the broader groups of general first responders

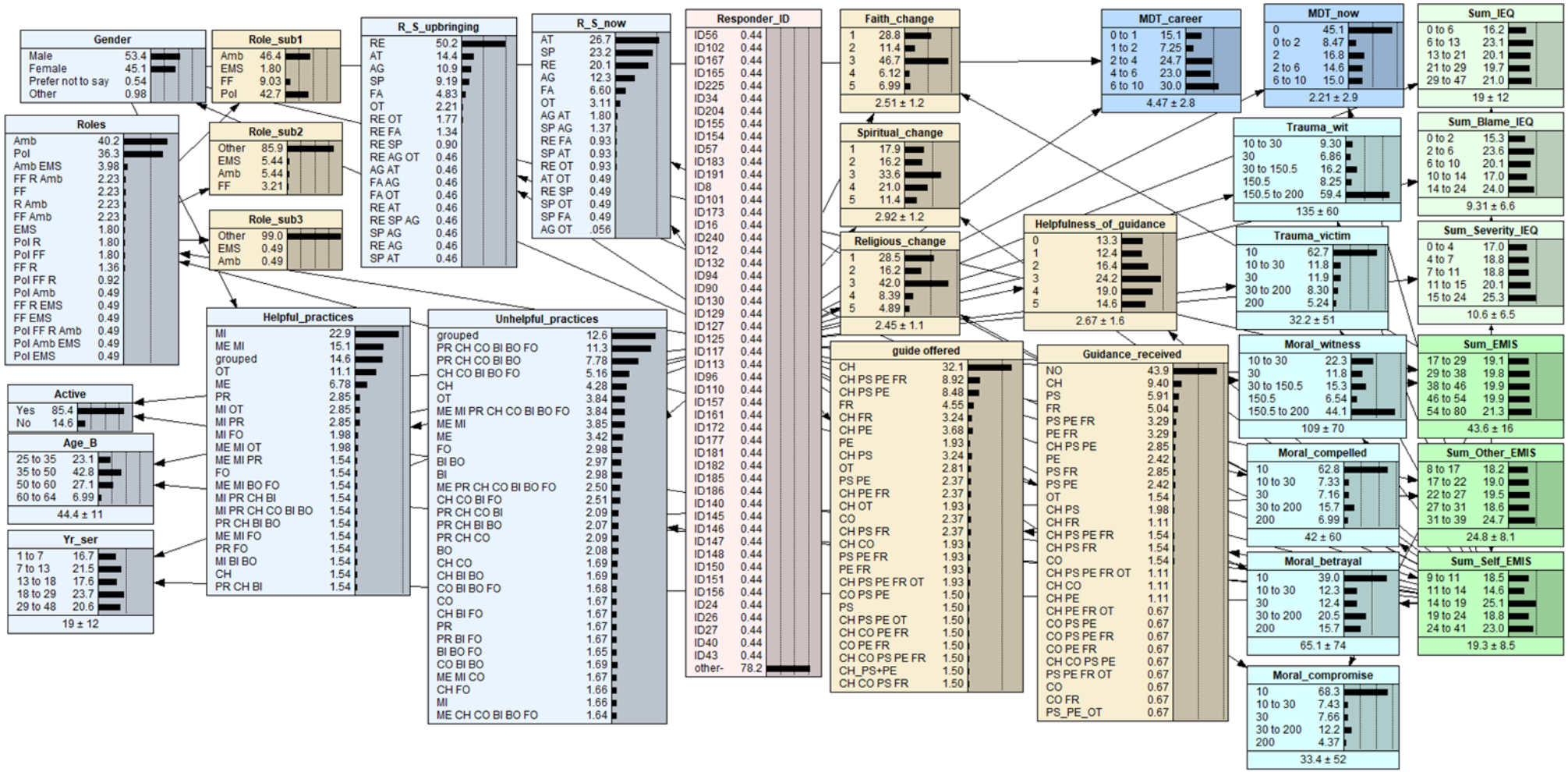

Figure 4. Directed Acyclic Graph (DAG) of Group 1 survey results.

Demographics variables

Participants from both groups were asked to provide their gender, age (in 5-year brackets), what emergency service they have served, and their total length time of service. Table 3 reports descriptive data of participants. Representatives of the 4 first responder services participated in the research. Compared to general first responders, the authors' group was statistically significantly older on average by 10.1 years ($p < .001$) and reported significantly longer service histories by 11.65 years ($p < .01$) and had the lowest percentage of currently active first responders.

Table 3. Descriptive demographic data for both groups of participants.

		Total group 2b	*Total group 1*	*Police grp 1*	*Ambulance grp 1*	*Fire grp 1*	*EMS grp 1*	*Multiple roles grp 1*
	n =	*16*	*229***	*97*	*120*	*27*	*16*	*32*
		Gender						
Male:	*n =*	*12*	*122*	*62*	*52*	*23*	*6*	*22*
	%	*75*	*53.28*	*63.92*	*43.33*	*85.19*	*37.5*	*68.75*
Female	*n =*	*4*	*103*	*35*	*64*	*4*	*10*	*10*
	%	*25*	*44.98*	*36.08*	*53.33*	*3.33*	*62.5*	*31.25*
Prefer not to say	*n =*		*1*		*1*			
	%		*0.44*		*0.83*			
Other	*n =*	*0*	*2*	*0*	*2*	*0*	*0*	*0*
	%		*0.87*		*1.67*			
Not stated	*n =*	*0*	*1*		*1*			
	%		*0.44*		*0.83*			
		Age						
Years	*M**	*54.5 +/-8.4*	*44.4 +/-11*					
	SD	*8.43*	*10.67*					
		Length of service						
Years	*M*	*29.56*	*17.91*	*18.76*	*16.54*	*24.81*	*24.13*	*24.26*
	SD	*12.41*	*10.94*	*10.22*	*11.14*	*11.75*	*10.51*	*11.12*
		Active status						
Still active	*n =*	*10*	*195*	*74*	*111*	*23*	*14*	*27*
	%	*62.5*	*85.15*	*76.29*	*92.5*	*85.19*	*87.5*	*84.38*

*Note: * Descriptive analysis of sample statistics were conducted in Excel with the exception of age statistics which were obtained from the BN model built in Netica. To preserve anonymity the age was entered by participants in 5-year age groups such as "25-29". ** The sum of participants of all professions is greater than 229 due to 32 participants having served in 2 or more roles.*

Validated scales adapted to measure moral suffering in first responders

The survey measured levels of moral suffering through three different modified scales (Appendix 2). It measured moral injury via the adapted EMIS-(M), perceived injustice through the adapted IEQ, moral distress through the MDT. The mean scores from all scales and each factor were correlated with every other scale and factor. As shown in Table 4, all scales and factors were statistically significantly correlated with each other. While the IEQ and EMIS all had strong correlations, the MDT was only moderately correlated with the other scales, with the exception of moral distress experienced over the entire career and all EMIS scores. These strong correlations suggest all the scales measured similar concepts, providing support for an overarching moral suffering concept. The MDT, which assessed the previous 2 weeks of distress, consistently presented the lowest correlations with the other two scales, suggesting the temporal locating of distress may impact reporting of suffering.

Table 4. Scale correlations and confidence intervals.

	Pearson Correlation	Sig. (2-tailed)	95% Confidence Intervals (2-tailed)[a] Lower	Upper
Total IEQ – Blame IEQ	.978	< .001	.972	.983
Total IEQ – Severity IEQ	.977	< .001	.970	.982
Total IEQ – Total EMIS	.724	< .001	.655	.782
Total IEQ – Other EMIS	.669	< .001	.588	.736
Total IEQ – Self EMIS	.658	< .001	.576	.727
Total IEQ – MDT career	.451*	< .001	.337	.551
Total IEQ – MDT last 2 weeks	.345*	< .001	.221	.457
Blame IEQ – Self IEQ	.911	< .001	.886	.931
Blame IEQ – All EMIS	.727	< .001	.659	.784
Blame IEQ – Other EMIS	.684	< .001	.607	.749
Blame IEQ – Self EMIS	.647	< .001	.564	.718
Blame IEQ – MDT career	.440*	< .001	.325	.541
Blame IEQ – MDT last 2 weeks	.342*	< .001	.219	.455
Severity IEQ – Total EMIS	.686	< .001	.610	.750
Severity IEQ – Other EMIS	.621	< .001	.533	.696
Severity IEQ – Self EMIS	.637	< .001	.552	.709
Severity IEQ – MDT career	.443*	< .001	.329	.545
Severity IEQ – MDT last 2 weeks	.334*	< .001	.210	.447
Total EMIS – Other EMIS	.920	< .001	.897	.938
Total EMIS – Self EMIS	.910	< .001	.884	.930
Total EMIS – MDT career	.616	< .001	.525	.692
Total EMIS – MDT last 2 weeks	.474*	< .001	.364	.571
Other EMIS – Self EMIS	.675	< .001	.596	.741
Other EMIS – MDT career	.604	< .001	.512	.682
Other EMIS – MDT last 2 weeks	.430*	< .001	.314	.532
Self EMIS – MDT career	.516	< .001	.411	.608
Self EMIS – MDT last 2 weeks	.438*	< .001	.323	.539
MDT career – MDT last 2 weeks	.568	< .001	.471	.652

*a. Estimation is based on Fisher's r-to-z transformation. * Items are only moderately correlated with each other*

Moral injury (EMIS)

Table 5 reports the EMIS scores for both groups of participants and sub-groups within Group 1 according to the type of first responder and non-active status. Pre-existing data on combat veterans used to validate the EMIS scale was used as a baseline for comparison purposes.

As shown in Table 5, Group 1, general first responders, had significantly higher levels of MI as measured by the EMIS compared to the combat veterans reported by Currier et al. (2018). The exception to this was in self-directed MI in firefighters and those who had served in multiple services. Although Group 2b, authors, presented higher levels of mean EMIS scores compared to the combat veterans, such comparison did not reach statistical significance. Group 2b presented statistically significantly lower EMIS scores compared to Group 1 in self-directed

scores ($p < .01$) and total scores ($p < .05$). The groups with the highest levels of distress were police and those who were no longer actively serving as first responders. These results support the notion that moral injury is indeed a relevant construct in the first responder community, and that Group 2b (authors) was not published due to their experiencing larger levels of distress compared to first responders in general.

Table 5. Comparison of EMIS scores and means across roles and active status with baseline source research.

		Base 1	*Base 2*	*Grp 2b*	*Grp 1 all*	*Amb.*	*Pol.*	*Fire*	*EMS*	*Multi-role*	*Non-active*
	n =	*286*	*624*	*16*	*229*	*117*	*94*	*26*	*16*	*32*	*32*
Total EMIS	*M*	*33.4*	*32.14*	*35.4*	*42.06****	*40.36****	*44.51****	*40**	*42.94**	*41.56**	*46.28****
	SD	*13.74*	*14.84*	*10.33*	*13.39*	*12.66*	*14.63*	*15.51*	*12.25*	*13.65*	*14.26*
Score Other	*M*	*18.71*	*17.22*	*21.4*	*24.27****	*23.37****	*25.88****	*23.19**	*24.69**	*24.78**	*26.56****
	SD	*8.1*	*8.23*	*7.15*	*7.51*	*7.39*	*7.36*	*8.9*	*7.08*	*8.12*	*7.59*
Score Self	*M*	*14.69*	*14.92*	*14.3*	*17.79****	*16.99****	*18.63****	*16.81*	*18.25**	*16.78****	*19.72****
	SD	*6.92*	*7.49*	*3.74*	*7.12*	*6.45*	*7.51*	*7.99*	*6.63*	*6.46*	*8.01*
					Mean scores						
M Other		*2.15*	*NA*	*2.68*	*3.03*	*2.92*	*3.24*	*2.90*	*3.09*	*3.10*	*3.32*
M Self		*1.66*	*NA*	*1.59*	*1.98*	*1.89*	*2.07*	*1.87*	*2.03*	*1.86*	*2.19*

Note: Source 1 and source 2 are two different combat veterans groups reported on by Currier et al. (2018) in the validation of EMIS scale. "Score Other" is the mean score for the other-directed factor within the EMIS scale. "Score Self" is the mean score for self-directed factors within the EMIS scale. Other-directed MI occurs when others betray a person, while self-directed MI occurs through actions or omissions deemed immoral by the person themselves. Items in bold represent scores that are greater than the "Base 1" group by Currier et al (2018).

*p values for significance of increased distress * <. 05, ** < .01, *** < .001.*

As alluded to above, the group of authors (Group 2b) obtained lower EMIS scores compared to the group of general first responders (Group 1). That is, the data support the notion that authors experienced lower levels of stress compared to the general group of first responders.

According to these results, the analyses of the auto/biographies and the interviews may describe experiences of psychological distress in first responders that are not unrepresentatively excessive in nature.

Moral distress (MDT)

Table 6 reports scores for the MDT. Data from three groups of nursing staff used to validate the MDT served as baseline data for the purposes of comparisons (Wocial and Weaver, 2023). Levels of moral distress for the two-week period prior to survey administration across all groups of first responders were generally lower than the baseline scores. However, for EMIS and IEQ scores, non-active first responders presented significantly lower distress over the two weeks prior to survey administration. As these former members are no longer exposed to work-based trauma or PMIEs, this lower score may indicate that time and distance away from the source of their distress allows for the alleviation of acute distress.

As previously mentioned, the MDT was also administered a second time to assess moral distress over respondents' careers. All measurements pertaining to respondents' careers were significantly higher than the benchmark scores from Wocial and Weaver (2023). Again, these results suggest that moral distress is a significant issue in the first responder community. Also, while non-active first responders had the lowest current levels of moral distress, they reported the highest levels of distress during their career.

Also noteworthy, unlike the EMIS scores, the author group (Group 2b) reported non-significantly higher MDT scores compared to the group of general first responders (Group 1).

Table 6. Moral distress scores for first responders by roles and active status with baseline source research.

		Base data			*Grp 2b*	*Grp 1 all*	*Amb.*	*Pol.*	*Fire*	*EMS*	*Multirole*	*Nonactive*
		Never left	*Cons. leave*	*Left role*								
	n =	*244*	*175*	*110*	*16*	*216*	*115*	*91*	*26*	*16*	*32*	*31*
last 2 wks.	*M*	*2.2*	*3.92*	*2.99*	*2.31*	*2.07*	*2.39*	*1.83*	*1.96*	*1.56*	*2.09*	*1.38^*
	SD	*2.11*	*2.57*	*2.51*	*2.46*	*2.64*	*2.79*	*2.52*	*2.66*	*2.06*	*2.68*	*1.84*
career	*M*				*4.69***	*3.74***	*3.94****	*3.65****	*3.85***	*3.88***	*4.34****	*4.84****
	SD				*3.28*	*2.64*	*2.72*	*2.6*	*2.82*	*2.22*	*2.55*	*2.71*

Note: Scores in italics are from initial research participants from Wocial and Weaver (2013) where respondents were nurses and split into groups who had never left a role, those considering leaving their current roll and those who had left their role. Significance test compared differences between those who had never left their role in the base data with all first responder categories.
*p values for significance of increased distress * <. 05, ** < .01, *** < .001. P values for significance of decreased distress ^ <. 05.*

Perceived injustice (IEQ)

Table 7 reports scores from the IEQ for first responders compared to a group of workers who suffered musculoskeletal injuries from workplace or motor vehicle accidents (Sullivan (2008). Generally, comparison scores were statistically significantly lower for first responders or failed to reach statistical significance. However, caution must be exercised in rejecting perceived injustice as a relevant part of moral suffering. Firstly, it must be remembered that the comparison group was not randomly selected but consisted of persons with serious injuries Therefore, it could be expected that a research group would be lower in perceived injustice scores. Secondly, the "blame" factor of the IEQ was comparable with injured persons. The difference between all but one group of first responders and the injured persons failed to reach significance in the "blame" factor. Additionally, the mean scores of police for the blame factor were statistically significantly higher. This suggests that cognitions of blame in the perception of injustice have relevance to first responder moral suffering in general. The blame factor measures if respondents blame their injury or, in the case of this survey, poor state of wellbeing on another person. For example, an IEQ blame question was "I suffer as a result of someone else's negligence." To prevent distress, it will be important to discover what actions

emergency workers find blameworthy and who might be doing them. Discovering what lies under cognitions of blame is an important element in the qualitative research.

The IEQ is the only of the three scales to define a threshold for clinically significant levels of distress, which corresponds to the 75th percentile and above in the source data. The prevalence of clinical levels of distress was equal to or greater than the baseline data in both police (25.77%), and participants who are no longer active first responders (33.33%). Again, these results suggest police officers may experience higher levels of distress compared to other groups of first responders. Again, results support the notion that perceived injustice, particularly cognitions of blame, is a relevant issue for first responder moral suffering.

Table 7. Comparison of IEQ scores across roles and active status with baseline from source research.

		Base	*Grp 2b*	*Grp 1 all*	*Amb.*	*Pol.*	*Fire*	*EMS*	*Multirole*	*Nonactive*
Total	*M*	*19.6*	*15.3*	*18.17*	*15.8^^*	*21.12*	*13.44^^*	*17.56*	*14.22^^*	*21.42*
	SD	*12.6*	*10.95*	*12.06*	*11.48*	*12.05*	*11.08*	*11.67*	*10.42*	*13.21*
Blame factor	*M*	*8.2*	*6.44*	*8.35*	*7.16*	*9.77**	*6.37*	*7.69*	*6.28*	*9.67*
	SD	*7.8*	*5.66*	*6.25*	*5.92*	*6.2*	*5.6*	*6.81*	*5.22*	*6.83*
Severity factor	*M*	*11.3*	*8.06^*	*9.82^^*	*8.64^^^*	*11.35*	*7.07^^^*	*9.88*	*7.94^^*	*11.76*
	SD	*6.4*	*5.75*	*6.09*	*5.82*	*6.16*	*5.69*	*5.34*	*5.48*	*6.71*
		Over clinical distress threshold								
	n =		*2*	*44*	*18*	*25*	*3*	*2*	*3*	*11*
	%	*25*	*12.50*	*19.21*	*15*	*25.77*	*11.11*	*12.50*	*9.38*	*33.33*

Note: Italics indicates source data reported by Sullivan (2008). "blame" and severity represent the two factors within the scale. Sullivan reports that the cut-off for clinically significant distress is a score of 30 and represents the 75th percentile of respondents. Items in bold represent scores that are greater than the scores reported by Sullivan (2008).

*p values for significance of increased distress * <. 05. P values for significance of decreased distress ^ <. 05. ^^ < .01, ^^^ < .001.*

Religiosity, spirituality, and faith

Part two of the survey questionnaire enquired about participants' current and past (upbringing) identification of their religiosity, spirituality, and faith. It also enquired about the magnitude of any change in religiosity, spirituality, and faith (Appendix 2). Table 8 reports the responses to the self-identification of participants into various groupings. Table 9 reports the growth or decline in the participants' religiosity, spirituality, and faith.

Table 8. Reports of religious and spiritual self-identification of participants.

	Group 2b (n = 16)		*Group 1 (n = 229)*	
	Upbringing	*Current*	*Upbringing*	*Current*
Atheist	*6.25%*	*12.50%*	*14.40%*	*26.70%*
Spiritual	*0.00%*	*18.75%*	*9.19%*	*23.20%*
Religious	*68.70%*	*18.75%*	*50.20%*	*20.10%*
Agnostic	*12.50%*	*18.75%*	*10.90%*	*12.30%*
Faith	*0.00%*	*6.25%*	*4.83%*	*6.60%*
Other	*12.50%*	*0.00%*	*2.21%*	*3.11%*
multiple	*0.00%*	*24.95%*	*8.27%*	*7.99%*

** Note: responses were to the question, "Many people have a spiritual, religious, or faith-based upbringing and current experience. 1) How would you currently describe yourself? 2) How would you describe your upbringing?"*

Table 9. Reports of religious and spiritual self-identification of participants.

	Group 2b (n = 16)			*Group 1 (n = 229)*		
	Religiosity	*Spirituality*	*Faith*	*Religiosity*	*Spirituality*	*Faith*
Considerable growth	*18.80%*	*37.50%*	*6.25%*	*4.89%*	*11.40%*	*6.99%*
Little growth	*12.50%*	*12.50%*	*6.25%*	*8.39%*	*21.00%*	*6.12%*
No change	*31.20%*	*18.80%*	*50.00%*	*42.00%*	*33.60%*	*46.70%*
Diminished a little	*12.50%*	*12.50%*	*12.50%*	*16.20%*	*16.20%*	*11.40%*
Diminished considerably	*25.00%*	*18.80%*	*25.00%*	*28.50%*	*17.90%*	*28.80%*

** Note: responses were to the question, "As a result of your work as a first responder, how do you feel your religious beliefs/spirituality/faith in a specific divine being or God has changed?*

The BN model allowed for the estimation of associations between religiosity/spirituality elements reported in the above tables with moral suffering being measured by the three scales (EMIs, MDT, and IEQ). Figure 5 reports the associations between *spiritual* change and moral suffering. In relation to changes in spirituality in participants' lives, results showed a direct relationship between spirituality and moral suffering. When participants' spirituality declined, it was associated with elevated levels of moral suffering, as measured by all factors of all three scales. Additionally, there were mild associations with spiritual growth and increased moral suffering. Those who reported the lowest levels of moral suffering reported either no change or some growth in spirituality. The experience of increased perceived

injustice, as measured by the IEQ, was the most substantially associated form of moral suffering with spiritual decline, with increased mean levels of distress increasing 31-33% for the total and each factor (blame, severity) of the IEQ scale. However, spiritual growth was associated with lower mean levels of perceived injustice. Mild associations existed between elevated MI, as measured by the EMIS, and spiritual decline in the range of 9-12% increased MI.

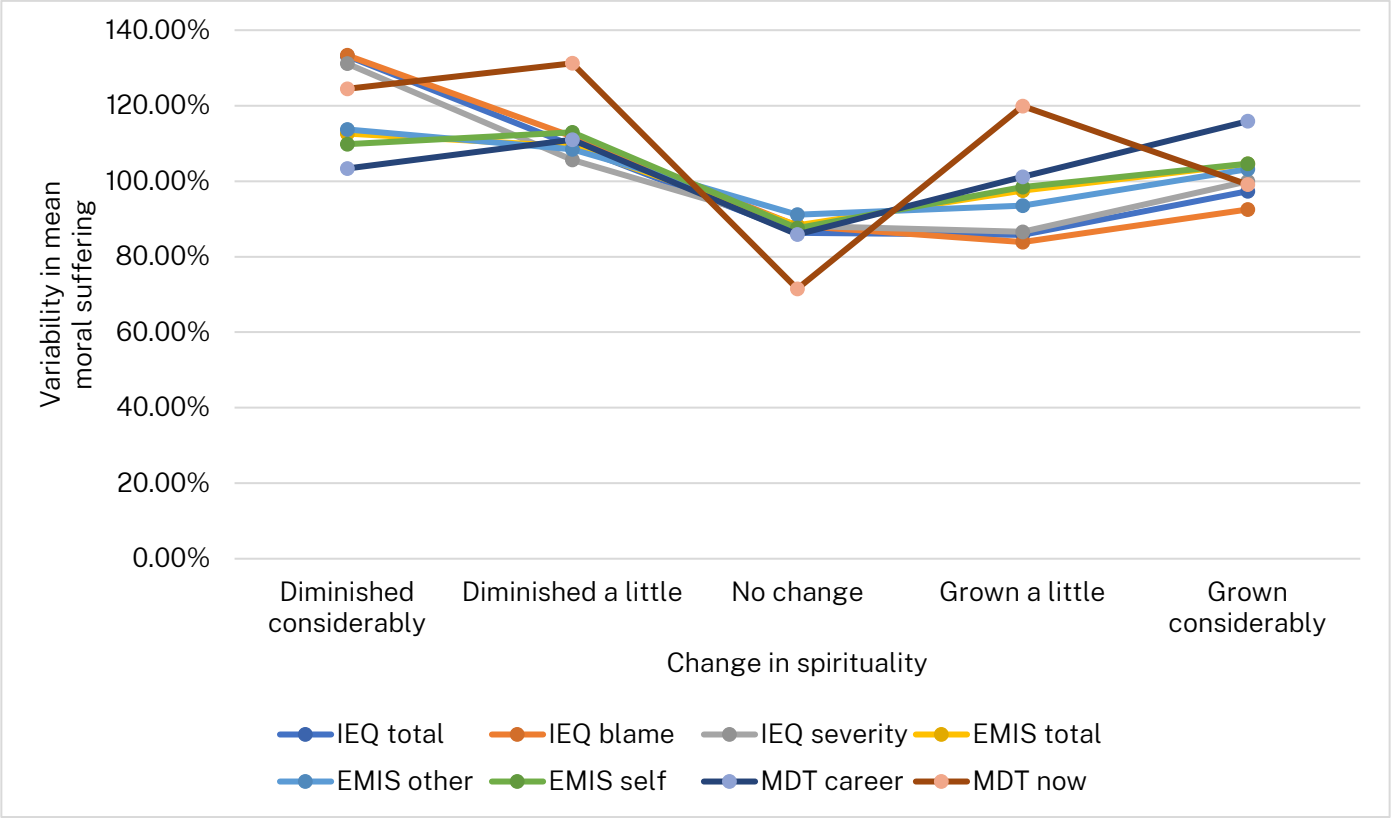

Figure 5. Variability in moral suffering by change in spirituality.

Note: "IEQ total" = total scores from IEQ scale, "IEQ blame" = scores from the blame factor, "IEQ severity" = scores from the severity factor, "EMIS total" = total scores from EMIS scale, "EMIS other" = scores from other-directed factor of EMIS scale, "EMIS self" = scores from self-directed factor of EMIS scale, "MDT career" = scores from estimation of moral distress over one's career, "MDT now" = scores from estimation of moral distress over the last two weeks

Religiosity, as distinct from spirituality, was also associated with moral suffering. Moral suffering across all domains, apart from MDT in the previous two weeks, was shown to increase among participants whose religiosity had either diminished considerably or grown considerably. Growth in religiosity was associated with reduced moral distress in the previous two weeks (Figure 6). The discrepancy between MDT scores is perhaps explained by the concept of Posttraumatic growth (Tedeschi et al., 2017). When suffering occurs, an avenue is open to R/S growth. However, different religious coping mechanisms can increase or decrease distress, meaning careful R/S care is necessary (Park et al., 2018). While causality cannot be

inferred between R/S and moral suffering, it appears clear that a stable religiosity is associated with lower levels of moral suffering and both growth and decline are associated with increased levels of moral suffering. These results support the existing research that shows R/S changes over time, and now shows that changes in R/S are associated with moral suffering. This is an area that may need to be explored further in the first responder community.

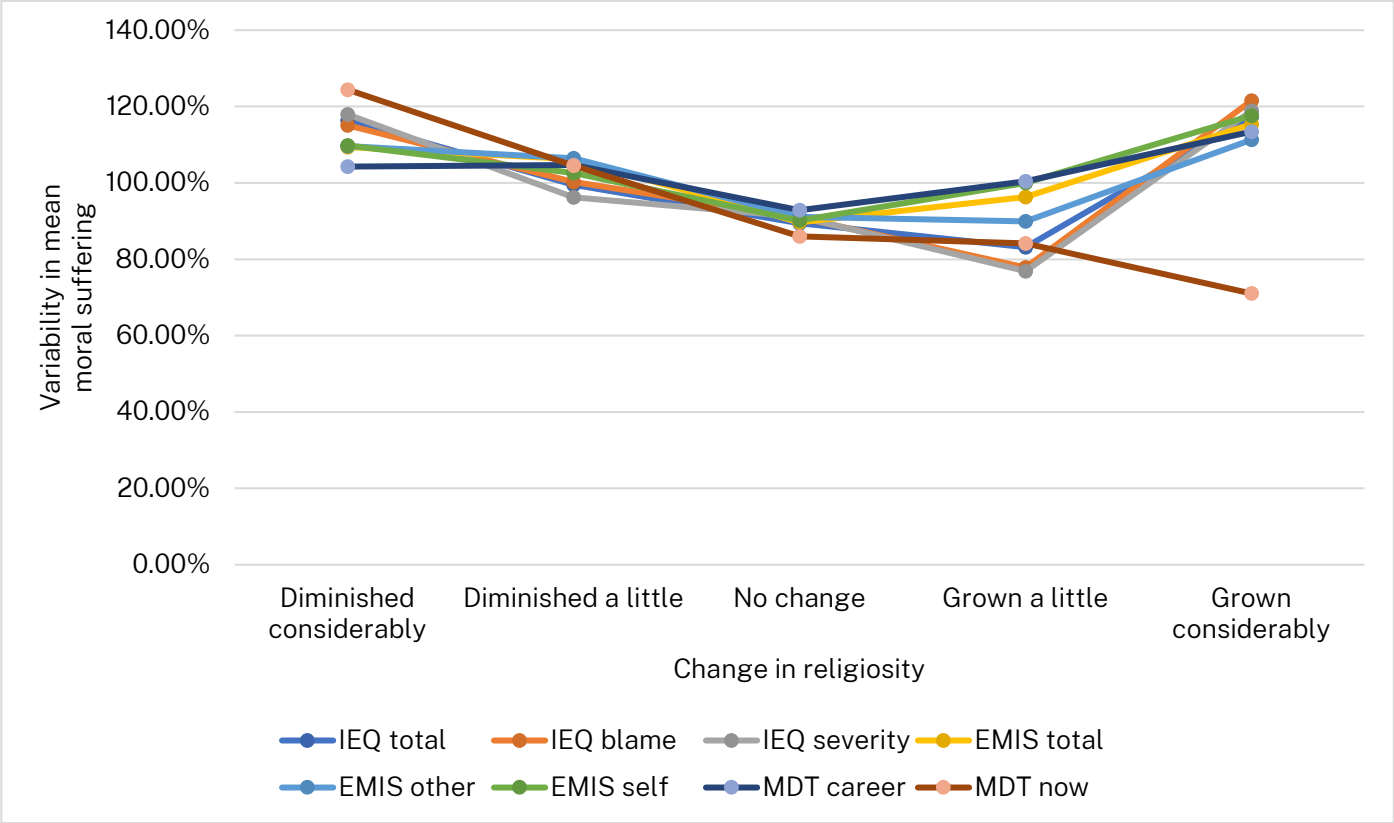

Figure 6. Variability in moral suffering according to changes in religiosity.

Note: "IEQ total" = total scores from IEQ scale, "IEQ blame" = scores from the blame factor, "IEQ severity" = scores from the severity factor, "EMIS total" = total scores from EMIS scale, "EMIS other" = scores from other-directed factor of EMIS scale, "EMIS self" = scores from self-directed factor of EMIS scale, "MDT career" = scores from estimation of moral distress over one's career, "MDT now" = scores from estimation of moral distress over the last two weeks

The self-identification with different R/S affiliations also showed varying associations with mean levels of moral suffering. Figure 7 reports the variability in aggregate moral suffering from all three scales by R/S affiliation. Those who reported both a current affiliation and upbringing with faith in a specific god or deity presented substantially lower levels of moral suffering. Those who report currently being an atheist also had lower mean levels of moral suffering, however, those who reported growing up as an atheist had higher mean levels of moral suffering. Of those who currently report being atheist, only 36% had an atheist

upbringing. Being part of a particular religion, either currently or during one's upbringing, was not associated with substantially lower or higher levels of distress, while those who affiliated as spiritual both now and during their upbringing reported increased mean levels of moral suffering.

These results may be indicative that religiosity acts as a protective factor against ongoing moral suffering. Those whose religiosity had declined considerably experienced elevated mean levels of moral distress in the previous two weeks (maroon line). However, those who reported considerable growth experienced substantially less moral distress in the previous two weeks despite having elevated levels over their career. Having religious coping mechanisms to process moral suffering may lead to the resolution of the suffering over time. These results support the notion that R/S factors are effective in treating moral suffering.

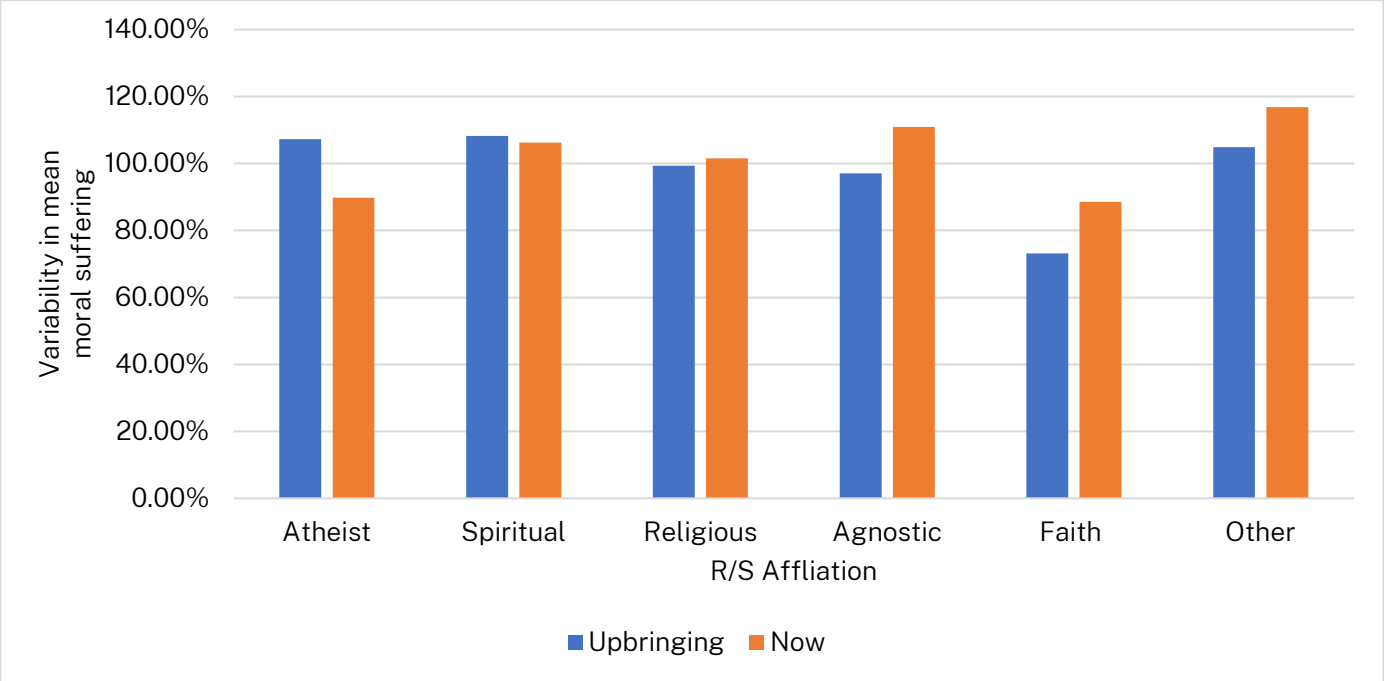

Figure 7. Variability in moral suffering according to changes in religiosity.

Perceived level of exposure to trauma, morally challenging situations, and betrayal. Questions 18-23 of the survey (Appendix 2) measured participants' perceived levels of exposure to traumatic events, and also exposure to four different morally challenging situations. Table 10 reports the estimated means for levels of exposure to traumatic events and to PMIEs. The highest exposure levels were to witnessing both traumatic events and immoral acts committed by others, i.e., a PMIE. All exposure levels except exposure to traumatic events, were lower in the author group of survey participants (Group 2b). Of note, the only significant differences were in the reporting of perceived betrayals which was

469.65% higher in Group 1 compared to Group 2b ($p < .001$) and being required to act outside one's own morals which was 83.83% higher in Group 1 ($p = .01$).

A total of 85 first responders (37.12%) in Group 1 reported having felt betrayed by a manager, colleague, or systems/people in their organisations over 50 times during their career. This finding supports the notion that exposure to betrayal is high in first responder organisations, and that the authors' group had similar levels of exposure to PMIEs as the broader sample of general first responders.

Table 10. BN estimated means and standard deviations of the number of trauma exposures and PMIEs in the groups of authors and general first responders.

	Group 2b		*Group 1*	
	M	*SD*	*M*	*SD*
Attending traumatic events	*139.89*	*61.69*	*135.07*	*60.10*
Victim of trauma	*25.36*	*33.38*	*32.25*	*50.75*
Witnessed immoral acts	*101.5*	*83.22*	*108.94*	*69.89*
Required to act outside morals	*22.82*	*25.55*	*41.95***	*60.44*
Perceived betrayal incidents	*13.87*	*9.27*	*65.14****	*73.88*
Acted against moral convictions	*30.41*	*33.73*	*33.41*	*52.08*

*Note: Source is BN nodal data that estimates means from machine learnt discretisation of data. p values for significance of increased distress ** < .01, *** < .001*

Figure 8 reports associations between aggregate mean levels of moral suffering from all three scales and exposure to trauma and PMIEs. As expected, it was observed that increased exposure to such events was associated with increased levels of moral suffering. However, different variables showed substantially greater increases in moral suffering. For instance, witnessing very high levels of trauma was associated with only a 3.64% increase in mean levels of distress, while all other categories showed substantially higher increases. The largest associations between increased exposure and increased moral suffering were for being a victim of trauma violence (34.17%), acting against one's own moral code (34.08%), being compelled to act against one's own morals (29.84%), betrayal at work (26.59%), and witnessing immoral acts (19.57%).

These findings provide support for the assertion in the literature review that trauma exposure in itself is not substantially associated with increased moral suffering but being the victim of trauma is. Additionally, exposure to all categories of PMIEs led to substantial increases in mean levels of moral suffering.

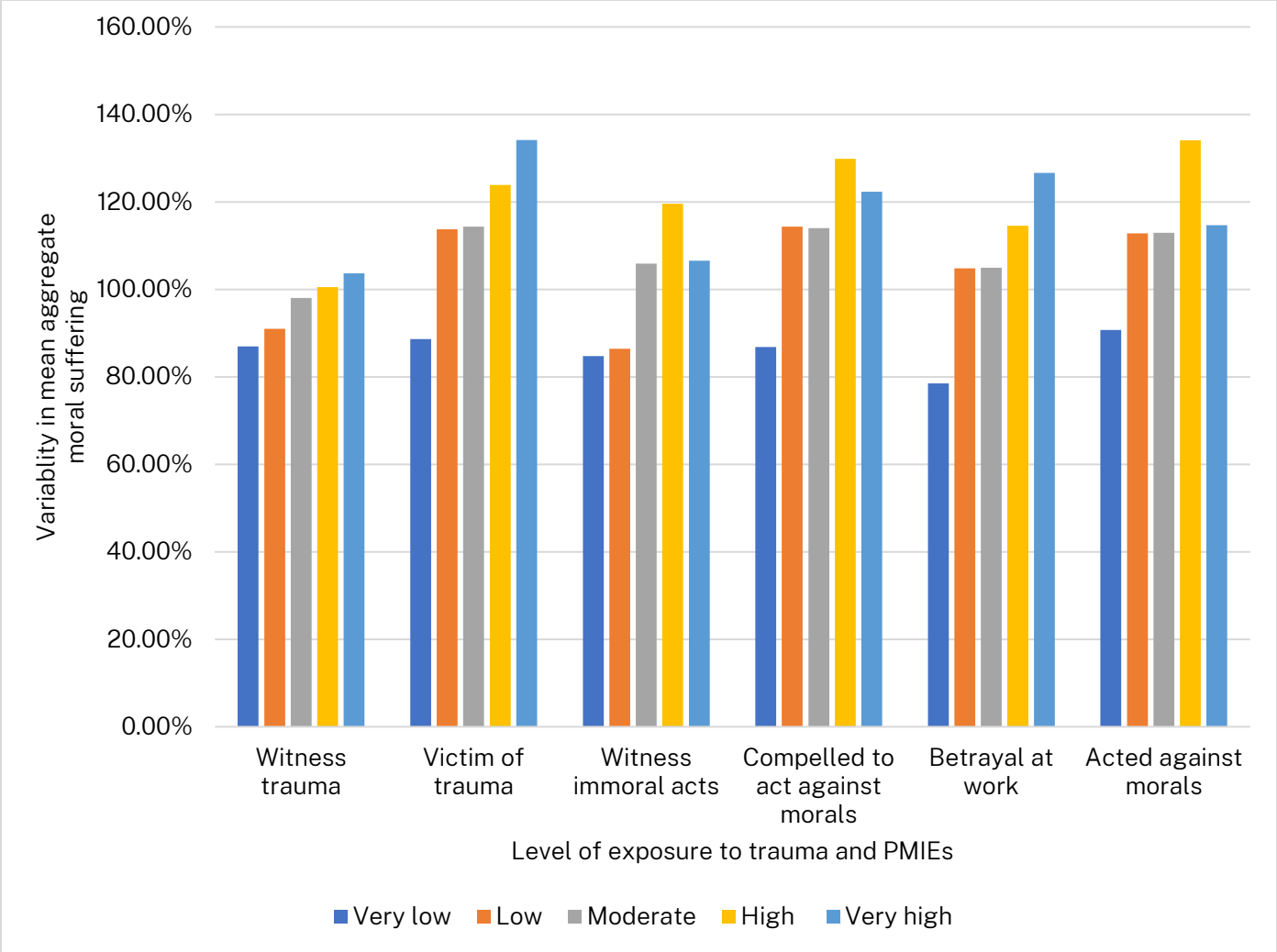

Figure 8. Variability in aggregate mean moral suffering levels by exposure to trauma and PMIEs.

The quantitative data first aimed to answer the question "What is the extent to which first responders are exposed and affected by different types of moral suffering?" The quantitative findings indicate that moral suffering exists at varying levels in different first responder occupations, especially in policing organisations. Former employees also presented higher rates of distress compared to all groups of active serving members, which accords with other research that reports higher levels of distress in former members (Beyond Blue Ltd., 2018). Additionally, the data supports the notion that moral suffering arises from PMIEs more so than from exposure to traumatic events. In addition, the data aimed to answer, "How are reported moral suffering connected to spirituality?" Support was also given to the notion from the scientific literature discussed in the Introduction section of this report that there is a strong association between R/S and moral suffering. Consequently, it is reasonable to use spirituality to treat and prevent moral suffering in first responder organisations.

Qualitative Results

As described above, qualitative methods were employed primarily to gain insight into the nature and extent of moral suffering.

Analysis of auto/biographies

An essential element of NOI that was applied to both the analysis of the auto/biographies and the analysis of the semi-structured interviews was to report on the "identity positionings" that authors either consciously or unconsciously assign to themselves in their narrative as they seek to understand the impact of events on the process of personal meaning-making (Hiles et al., 2017). By explicitly recognising how first responders identify themselves in different parts of their story the researchers were able to better understand the relationship between particular PMIEs and their impact on the self-identity and consequently on the moral suffering of the first responders.

Identity positioning

The following identity positionings were commonly reported throughout the auto/biographies and interviews:

The "conflicted self"

The conflicted self describes an identity that lacks the consistency of purpose because of becoming a person who is internally conflicted as a result of being the subject or object of events causing moral dissonance. It was expressed in the auto/biographies and interviews by sentiments such as, "*Reason told me it was the wrong course of action, but I still felt guilty.*"

The "detached self"

The detachment identity refers to the detachment from people and one's own emotions, with one first responder reporting it as the sensation of being, "*devoid of feeling for anyone or anything."*

The "abandoned self"

The abandonment identity was often the final point of moral suffering and arises when one feels isolated from support and even rejected by associates and the organisation they work for, as one wrote, *"the key source of trauma was not the actual case, or its management, the sense of abandonment I felt from the [...] service."*

"Ironic vulnerability"

The overarching identity positioning was labelled as “ironic vulnerability”. The auto/biographies and interviews showed that while first responders are well trained in task performance, they report an expectation from themselves and society that they are heroic characters impervious to harm. Qualitative analysis showed this perceived expectation hangs increasingly heavily on their shoulders as their careers progress. First responder work breaks a worker’s self-identity as being in control, as they come to realise, they are vulnerable to betrayal and distress, or as one of the authors put it, they are *“Ten feet tall and not quite bullet-proof”*.

Also, many of the stories provided evidence that this vulnerability was increased as a result of organisational and leadership betrayals. When first responders were in greatest need of support, and had a reasonable expectation of that support, at times it was not present, with one participant stating, *“I feel like [the lack of support] is because of that sense of betrayal when I was seriously unwell and there was no one there who was helping.”* Not only was support absent, at times there were forces within organisations working against them so that they believed they had to “watch their backs” and that the promise of support from their “blue family” did not eventuate.

Religion and spirituality

Religiosity and spirituality (R/S) were common themes, with nineteen of the twenty-one autobiographies containing at least a fleeting mention of R/S influences and beliefs of the book subjects. Two of the books were overtly and forthrightly inclusive of the benefits of particular faith positions for wellbeing. It was not uncommon for first responders to discuss their loss or change in religiosity, with one participant saying, *“I think what exacerbated that change was some of the things that I saw as a police officer over eighteen years. How the hell could there be a God? However, there are still some things that I've seen which I just can't explain…”*. This experience of spiritual ambivalence is perhaps well summed by another who said about God, *“I think if I'm to delve into it deeply, and I probably haven't, I probably still like to think that there's something there, […], I think it just simmers in the background”*. A latent and often unexplored spirituality was common for many first responders.

As a result of religious upbringing, latent spirituality, and a need for comfort many of those who declared they were not religious still reported seeing underlying spiritual elements in the life and death situations they faced. Many also reported how they found comfort in prayer, ritual, or the power of nature as a transcendent force. Another participant noted that, *“part of me feels as though my whole life I've had a guardian angel protecting me and, no doubt, answering the prayers of my parents”.* The notion of having soul that is impacted by the work

was also a common theme with one explaining, *"all I can say is that the work is like a vortex. It sucks your mind, body, and soul straight out of you. You become devoid of feeling for anyone or anything".*

Supporting services

First responders also discussed the support mechanisms provided by organisations. Stigma for suffering mental health difficulties was mentioned by twelve different participants. One participant commented, *"if you wanted to be treated like a leper, just leave work with a mental illness"*. When help was forthcoming, it was reported that frequent changes of wellbeing staff or a lack of coordination in the team was unhelpful. One first responder reported trying multiple ad hoc strategies to reduce psychological distress such as health retreats, seeing psychiatrists and psychologists, taking prescription medication, yoga courses, relaxation retreats and more all with little overall benefit. While some strategies were reportedly helpful, others appeared to cause greater distress and were not part of a coordinated approach to service provision. Services may offer a suite of interventions to staff, but their multiplication may not work well, with one stating they were, *"attending weekly sessions with a psychologist, downing large doses of medication, and practising meditation, deep breathing and relaxation techniques as well as undergoing some cutting-edge treatment such as eye movement desensitisation reprocessing therapy (EMDR) and cognitive behavioural therapy (CBT), yet nothing seemed to be working".* The impact of the delivery of uncoordinated intervention strategies through MDWTs may also lead to confusion and further distress among workers who are provided with many different and even contradictory intervention strategies.

Symptom manifestation

Throughout the NOI analysis of the auto/biography and interview extracts, special attention was paid to symptoms of distress. All of the participants reported varying levels of distress as a result of exposure to PMIEs. Throughout the narratives of first responders the following feelings were reported forming what the researcher labelled as "spiritual injury:"

- Shame
- Anger
- Exhaustion
- Moral dissonance
- A sense of abandonment and betrayal
- Challenges to personal Identity
- Suicidality
- Substance abuse

- Harm caused to and experienced through personal relationships outside work

Causal events and cultures

PMIEs are events that may induce moral suffering, however, causes of moral suffering may transcend an event based model of harm. Evidence also suggested that serious consideration should be given to considering the impact of potentially morally injurious cultures (PMICs). It is therefore important to clearly define the types of events and cultures that workers perceive as betrayal and abandonment in order to eliminate those stressors. Accordingly, once these events and cultures are identified they can directly inform the development of a BPSS framework for preventing psychological distress among first responders.

Qualitative analysis of auto/biographies and interviews found recurrent themes reported by participants in relation to moral suffering. These themes related to perceptions of betrayal, injustices experienced and witnessed by first responders, poor leadership, and other organisational factors. These stressors were further categorised as being either "content stressors" that arise from the content of first responder work, or "contextual stressors" that arise from the organisational context of first responder work (Cox et al., 2000)

- Content stressor - Civilian dissonance around death: First responders' frequent exposure to death, while civilian policymakers with little experience of death dictate actions and procedures for first responders,
- Content stressor - Traumas involving vulnerable people, such as children and women, and also suicide,
- Contextual stressor - Poor organisational justice, particularly around complaints against first responders and organisational treatment of injured workers,
- Contextual stressor - Lack of appropriate resources and heavy workload above reasonable expectations,
- Contextual stressor - Poor recognition for first responders' work including harmful practices in relation to the awarding of medals,
- Contextual stressor - Poor leadership practices in relation to communication, non-active listening, and in relation to staff wellbeing.

In summary, the qualitative data aimed to answer the questions, "What are the types of moral suffering first responders are exposed to?", "What is the impact of events related to moral suffering on one's meaning-making and identity?", and "What types of organisational practices and cultures contribute to moral suffering?". The data shows that events involving negative interactions with unsupportive leadership and also organisational injustice impacted

substantially on the identity and meaning-making ability of first responders. The resultant challenge to personal identity led to a range of harmful symptoms including suicidality and substance abuse. Also, while many disavowed religiosity, a latent spirituality often brought hope and comfort. These findings support the notion that moral suffering is a concept that requires a holistic approach, including spirituality, in preventing psychological harm.

Practical Theological Reflection

Both the qualitative and quantitative data analyses showed that first responders are frequently exposed to PMICs often leading to psychological distress in the form of moral suffering. Such moral suffering was evident in the participants' identity positioning: conflicted self, detached self, abandoned self, and ironic vulnerability. In addition, results pointed to symptom manifestation among first responders consistent with moral injury, such as shame, anger, exhaustion, moral dissonance, sense of abandonment and betrayal, challenges to personal identity, suicidality, substance abuse, and harm caused to and experienced through personal relationships outside work. These results also showed that spirituality plays an important role in attenuating such moral suffering. Based on these findings, the two important themes that were subject of the PTR were the nature and response to betrayal, i.e., response to experiencing an injustice at work or to witnessing one, and the need for supportive leadership within a secular spiritual framework.

Betrayal

Both the extant literature and current research data revealed that a sense of betrayal is a central theme of moral suffering (Hodgson et al., 2022). It manifests as high levels of other-directed MI and a sense of blame at perceived injustices, consistent with the current research findings. Qualitative accounts of unjust organisational cultures and poor leadership behaviours also attested to the importance of betrayal. The word "betray" is a translation of the Greek word παραδιδωμι (*paradidomi*), which literally means to hand over to something or someone. Throughout the biblical narrative betrayals involve a breach of covenant relationships AND the handing over to an unjust situation or powers (Maxwell, 2017). The biblical narrative speaks both against the act of betrayal itself and forms a framework for how one might positively process the event if and when it occurs.

The need for forgiveness and restoration in the workplace

When one is betrayed, there is a call for justice to be done, but not for human vengeance to be taken. People are asked to entrust themselves to the one who judges justly, which in biblical context is God, but also encourages the construction of earthly systems of justice. Within a secular setting, when organisations create codes of conduct and systems of punishment or

reward for employees, they make steps towards a system of justice. However, biblical systems of justice preference the drive toward forgiveness and restoration with the catch cry "mercy triumphs over judgement" (English Standard Version Bible, 2001 James 2:15). The PTR illuminates the need for organisations to create systems of justice for their workers that value restoration and learning, similar to those advocated in the development of just cultures (Dekker, 2018; Goodsman & Wong, 2021).

The power of listening to employees

The theological call for merciful justice that is demanded, requires leaders to set the example in truth-telling and the drive to enact meaningful reconciliation (Volf, 2019). Without truth, justice cannot be served, and reconciliation is not truly achieved. Biblical just cultures allow all parties to speak, and for leaders and organisations to listen and act with grace to prevent covenant breaches. In contrast, according to our findings there is a pervasive perception that leaders do not listen to employees and consequently employees are not heard. Proverbial wisdom is filled with the call for those in power to listen, echoing the call from participants in the current research as well as extant research literature (Braithwaite et al., 2007; Ge, 2020; Lauritzen, 2022). The PTR illuminates the need for organisations to facilitate two-way communication in the truth telling process between workers and supervisors.

The need for individuals to learn to examine their own behaviours

Additionally, whilst acknowledging a place for rightful anger at injustice, individuals are asked not to take revenge through any means at all. When systems of truth-telling and reconciliation are not available the temptation to vengeance is high. Revenge for modern workers can come from moral disengagement where acts of vengeance through non-compliance that can be acts of vengeance for breaches of psychological contracts (Bordia et al., 2008). In addition, when present, this need for revenge can potentially take the form of absenteeism, with employees taking unwarranted leave. In light of betrayal by others and a drive to avoid vengeance, the PTR illuminates the need for individuals to examine themselves with sober self-reflection and commit to "covenant faithfulness" in place of further betrayal of one's integrity through acts of vengeance. This process of self-reflection has dual elements of understanding oneself and understanding others.

Moral imagination

People are asked to "examine themselves" to take responsibility for their own character and asked to exercise one's "moral imagination" (Cameron, 2011). In line with current research, the PTR highlights the need for explicit moral imagination exercises because our moral reasoning is often held tacitly (Blumberg et al., 2022; Cox, 2018; Rushton, 2016). Moral imagination

involves mapping the tacitly held elements of our moral framework with the possibility of expanding and/or confirming its scope in the light of reflective practice.

Enlarged thinking

Secondly, the PTR suggests that an alternate to leaders and workers judging each other, is through what has been described as "enlarged thinking" (Volf, 2019). People are encouraged not to jump to conclusions by "taking the log out of one's own eye," a common biblical concept that describes being aware of one's own faults before casting judgement on others. Such self-examination helps avoid what others might call the "fundamental attribution error" (Ross, 1977), which is defined as the human tendency to over-emphasize personality-based explanations for behaviours observed in others while under-emphasising situational explanations.

Enlarged thinking is a practice that workers and leaders can be trained to undertake to give a basis for mutual understanding and loving kindness. This in turn creates a foundation for forgiveness of self and others that is found to assist the alleviation of moral suffering (Griffin et al., 2020; Levi-Belz, Dichter, et al., 2020; Sullivan, 2008). The PTR advocates the practice of moral imagination and enlarged thinking as practices that have a long and rich spiritual heritage that enhance current reflective practices, enable forgiveness, and restore wellbeing.

Leadership of ironic vulnerability

The PTR reflected on the findings from the qualitative research that show the ironic vulnerability of first responders who are thought to be impervious to harm. In contrast, leaders must recognise the vulnerability of workers in first responder organisations who have a high trauma load. Front line leaders are in a place to address many of the issues that first responders have reported to cause harm that were identified in the current study. During the PTR the role of the leader was interrogated to suggest alternate ways of leading to prevent moral suffering.

When the span of the biblical corpus is examined, it became evident that leadership is regularly discussed through a shepherding motif. The greatest Old Testament king, King David, was a shepherd before his coronation, regularly protecting his father's vulnerable flock from lions and bears. David is then unsurprisingly the first to be recognised as shepherd king (2 Samuel 5:2). When God's people were led astray it was by bad shepherds (Ezekiel 34:1-6), while the promise of a new shepherd king like David to return the people to safety was a repeated theme (Micah 5:4, Ezekiel 34:11-16). That new shepherd was realised in the person Jesus, the good shepherd who laid down his life for his sheep (John 10:11). This sacrificial care

is the embodiment of servant leadership that seeks not to be served by others, but to serve those they lead. Research has noted that servant leadership emphasises the service and devotion of a leader through service to subordinates and listening with deep empathy, which in turn improves organisational citizenship and behaviour in those led (Choi, 2018; Greenleaf, 1977).

Addressing moral suffering through key leadership behaviours

Servant leaders lead in a way that humbly cares for those under their charge, by providing adequate resources to fulfil work demands, listening in times of heightened stress, and by providing immediate and regular recognition and gratitude. These kinds of needs were raised in the qualitative research, and to which good leaders will respond. Under the shepherd motif, the PTR illuminated nine key leadership behaviours as having the ability to address the causes of suffering identified in the qualitative data. These nine behaviours also are found in the contemporary research literature (Anselmus Dami, 2021; Bowen et al., 2010; Crosweller, 2022a, 2022b). Within a just culture, the nine behaviours create the conditions for trust and loyalty to be maintained. The PTR suggests a shepherd leader will be capable of eliminating many psychosocial hazards through,

1) Strong leadership that displays vision, authority, and sincerity,
2) A servant hearted, sacrificial attitude,
3) Filial and gracious physical presence with those they lead,
4) Two-way communication that values active listening, asking, and truth-telling,
5) The provision of physical and emotional needs of worker and facilitate pastoral care,
6) Protection of staff from harassment and organisational injustice,
7) Regular expression of gratitude to staff as enacted thankfulness,
8) Restoration and renewal of staff after wrongdoing, error, or conflict,
9) Continuing to be the follower of a higher authority.

In summary, the PTR provided spiritually informed strategies that directly address in the findings from both the quantitative and qualitative analysis. The reflection illuminated the need for organisations to address perceived injustice through the creation of just cultures that value restoration and organisational learning. Further, a new model of leadership that has well operationalised positive leadership behaviours arose from an examination of shepherd

leadership. Finally, the PTR suggested new ways of integrating moral and spiritual reflective practices that directly address moral dissonance and moral suffering.

Industry outreach activities

Informal industry outreach was conducted to provide insight into first responder organisations' perception and willingness to adopt a biopsychosocial-spiritual model. Forty-five representatives of first responder organisations across Australia and internationally were consulted (table 11). As previously mentioned, consultations were informal and did not constitute part of the scientific research methodology.

Table 11. List of first responder organisations consulted as part of outreach.

Agency/organisations covered	Contacted/Target	Completed for feedback and comment
Police NSW	*3*	*3*
Fire Service NSW	*2*	*2*
Ambulance NSW	*4*	*4*
Medical (College Emergency Medicine, College of Intensive care medicine)	*3*	*3*
Other Police, (all states and territories contacted plus, AFP, APF, NSW Police association, TPAV)	*15*	*15*
Other Fire, (all states and territories contacted plus, firefighter suicide researcher)	*8*	*8*
Other Ambulance (all states and territories contacted plus, VAU, College of Paramedicine)	*12*	*10*
Total	47	45

Lack of understanding about moral suffering with a focus on trauma exposure

Generally, organisations had a small depth of knowledge about moral suffering and its role in the psychological distress of workers in their organisations. It was believed by one participant that while moral suffering was not the most common condition, it did reside in those who had the most difficulty in resolving worker's compensation claims. Not a single organisation had programs in place that addressed moral suffering. All organisations were primarily focused on the delivery of interventions to treat trauma exposure instead. However, once the researcher opened the conversation on moral suffering and how it relates to worker wellbeing, it generated a great deal of interest and a desire to explore the developed BPSS framework in the future.

Psychological contract as a source of psychological distress

The consultations also provided evidence that the psychological contract organisations had with their employees can be a source of tension and distress. Being recruited into a "blue family[2]" provides workers with a realistic expectation that they will receive filial care over and above that required in employment contracts. Additionally, five participants noted that many first responder recruitment campaigns present implicit promises of adventure and excitement where workers do something "worthwhile" (Australian Paramedical College, 2022; Morris, 2022; New South Wales Police Force, 2022). However, when work is regularly mundane or apparently meaningless it can have a negative impact on the perception of the organisation by workers.

The most significant source of information that arose from the industry consultation was a reference to the work of Sidney Dekker and the creation of "just cultures" (Dekker, 2018). Just cultures have been related to workplace safety for many years, particularly in health care and aviation, but they have been less connected to well-being programs. Only two organisational representatives had heard of "just cultures" or considered their implications for the well-being of their staff. Just cultures aim to create a safer working environment and hold hope of addressing the perceived injustices workers can feel from PMIEs and PMICs. Inherent in just cultures are the need for forgiveness and reconciliation that are spiritually attuned practices.

Disunity among members of MDWTs

In relation to the possibility and willingness of MDWTs to address moral suffering, participants raised concerns about the lack of unity among different professional groups that compose MDWTs, namely chaplains, health coaches, peer supporters, psychologists, and social workers. Rivalry among such members of MDWTs was also perceived as possibly hindering the implementation of a model that addresses spiritual suffering. Three different representatives believed they had been morally wounded by the disunity and animosity within MDWTs. While there was widespread knowledge of moral suffering models, there was little depth of understanding of them, nor how they might address them.

In summary, the above results suggest that while moral suffering has been shown to be a matter that requires attention, many first responder organisations lack the current understanding of how to prevent and respond to moral suffering in a holistic way.

[2] The "blue family" is a term used to describe the extra loyalty and closeness of relationship that those who often wear a blue uniform have with each other.

Discussion

As previously discussed, the current first responder wellbeing model for preventing and treating psychological distress can be conceptualised as a "content" based model that focusses on the traumatic content of first responders' work whilst neglecting organisational, relational, and moral context (Cox et al., 2000; National Safety Council, 2020). Figure 9 displays how the current biopsychosocial model approaches the process of distress formation (green circles) and attempts to resolve it (orange boxes). It is a graphical illustration of how the current biopsychosocial content model largely overlooks organisational and betrayal events, identified in the current study, in the prevention of psychological harm. Therefore, a biopsychosocial-spiritual framework fills this gap by not only attending to the R/S elements of psychological harm that are currently being overlooked, but also by developing interventions aimed at eliminating the organisational causes of betrayal identified in the current study. The findings from the current study on moral suffering in first responders are discussed below together with proposed intervention strategies.

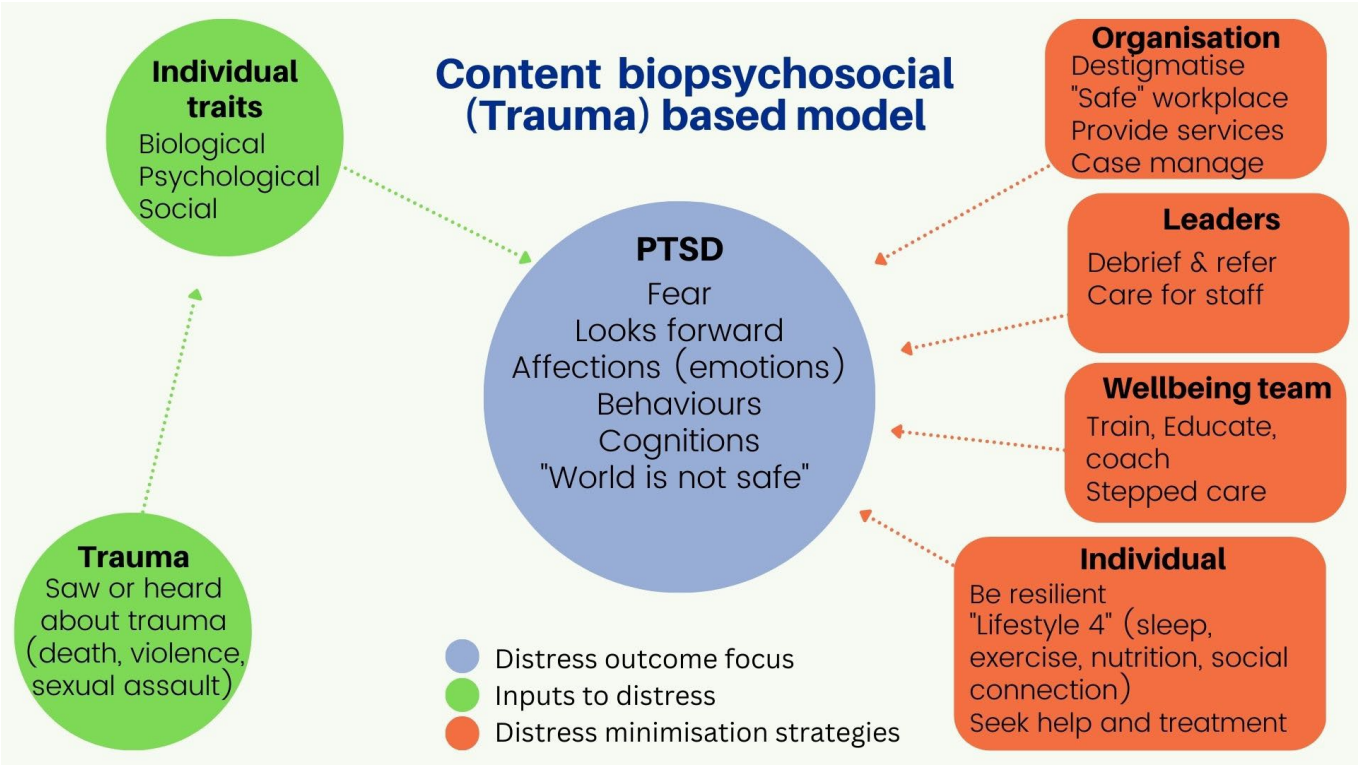

Figure 9. Conceptualisation of the current "content-based" model of responding to trauma.

Note: Green circles represent the traumatic content and personal traits that contribute to posttraumatic stress. The orange boxes represent four elements of response to distress in the content-based trauma model. The enlarged "individual" box (bottom right) indicates that the burden of the current framework lies

addressing "faults in the individual worker who must take responsibility for distress, and individual focussed interventions.

Moral suffering in first responders

The quantitative data revealed that moral suffering is present in first responders at moderate to high rates, and therefore must be considered in any program that aims to reduce psychological distress. Moral injury is perhaps the most discussed of all of the moral models of suffering examined here and it is almost exponentially increasing in research activity and application (Nieuwsma et al., 2022). However, moral suffering is wider than just one model. The current research administered three scales (EMIS, IEQ, MDT) that contained elements that were either statistically significantly higher, or not significantly different, from groups where moral suffering has been shown to exist, such as the military. As a result, simply applying strategies to address moral injury from the military to the first responder context may miss factors relevant in first responders (Papazoglou & Chopko, 2017). Elements of moral distress, moral injury, and perceived injustice, particularly perceived betrayals and blame attributions, which were shown in the current study to be prevalent in first responders, should be considered in any psychometric scale development or preventative program, including a BPSS framework.

The highest levels of moral suffering were found to be reported in police and those who have left the emergency services. In police and former members, the prevalence of clinically significant distress in the form of perceived injustice is the same or greater than those who have sustained serious physical injuries from motor vehicle or industrial accidents. This suggests that the possibility of developing clinically significant distress is the same if one has a career as a police officer or is seriously injured in a motor vehicle accident! Firefighters, while still having significantly higher levels of reported MI than combat veterans, were generally the first responder occupation with the lowest levels of moral suffering.

The quantitative data also found greater levels of moral suffering to be associated with events characterised by increased perceptions of betrayal more so than attending traumatic events (Figure 8). This is in line with previous research that shows betrayal events and organisational stressors to be important contributors to first responder distress (Beyond Blue Ltd., 2018; Bishopp et al., 2016; Carleton et al., 2020; Carter, 2021; Duran et al., 2019; Harvey et al., 2017; McCreary, 2020; Morash et al., 2008; Newman & Rucker-Reed, 2004; Purba & Demou, 2019; Roberts et al., 2021). Qualitative data further revealed traumatic incidents, involving vulnerable groups, negatively impacts on workers' moral and their just world beliefs. These moral frameworks and beliefs are often tacitly held and so when challenged can be difficult to

reconcile. However, as noted in the literature review, the current biopsychosocial framework has an excessive focus on harm resulting from exposure to traumatic events, whilst overlooking breaches of personal moral frameworks. To address this, the BPPS framework, therefore, includes interventions that help workers understand their moral frameworks in the context of their working environment and how to reconcile apparent betrayals before significant stress arises.

Of note in the quantitative research was the presence of perceived injustice among participants. Perceived injustice has not previously been considered in the context of military or first responder research on moral suffering. However, results from the current research show that some of the most substantial levels of moral suffering were observed in the domain of perceived injustice. Increased perceived injustice perceptions were found to be substantially associated with increased rates of trauma victimisation and betrayal and spiritual decline. For police, "blame" was shown to be significantly higher than in a group of injured accident victims, while for all other groups, blame was neither significantly higher nor lower. The combination of betrayal and blame forms a potent mix that is under-addressed in the current biopsychosocial focus on trauma exposure. Therefore, a BPSS model would have to address blame and betrayal.

Addressing blame and betrayal

As demonstrated by our results, blame cognitions often lead to feelings of anger and a desire for revenge so that interventions that alter the individual's perceptions of betrayal, and lead to the possibility of forgiveness and reconciliation, are important (Sullivan, 2008). As previously mentioned, it is possible to see many counterproductive workplace behaviours, such as absenteeism, risk-taking and inappropriate or criminal behaviour as acts of revenge for perceived injustices, making it critical to address them (Bandura, 1999; Bordia et al., 2008; Gilmartin, 2014; Hystad et al., 2014; Maercker & Horn, 2013). Moreover, once a perception of betrayal exists, future ambiguous stimuli are far more easily interpreted as acts of betrayal that can fuel yet further sensitivity to betrayal along with anger and counter-productive workplace behaviour (Phelps et al., 2021). To prevent a downward spiral of perceived betrayal and anger, a BPSS framework must provide a toolkit for workers and leaders to address betrayal perceptions and blame cognitions before anger and vengeance-taking become entrenched.

Interventions in the workplace

Individual tools identified in the PTR

The practice of "enlarged thinking" and "moral imagination" identified in the PTR address blame and betrayal. Organisations foster a mentally healthy workplace by training leaders and employees in these, hence embedding them as regular practices in the workplace (Blumberg et al., 2022; Phelps et al., 2022). Moral imagination has been advocated for millennia but has not been widely applied to worker distress caused by moral suffering. Military ethicist Deane-Peter Baker stated that "Developing a coherent account of one's own moral framework is fundamental to such reflection and the moral alertness it brings" (Baker, 2020, p. 190). The two reflective practices engage individual workers at a moral/spiritual level not currently done under the biopsychosocial framework and are best practiced alongside the formation of a strong moral identity.

The BPSS framework proposed in the current study, therefore recommends an identity to reinforce against the attacks on identity noted in the qualitative research. Many had felt conflicted, detached, and isolated in their identity positionings as a result of organisational betrayals. Workers are encouraged towards forming an identity that arises from a "guardian spirit" (Baker, 2020; Blumberg et al., 2019; Li et al., 2021; Rahr & Rice, 2015). The adoption of guardian spirit is over and against a warrior mindset which arises from anger and may lead to the public, leaders and administrators being conceived as enemies to be vanquished. A guardian spirit gives a framework for the expression of positive moral convictions at work in the service and protection of the public. Additionally, a guardian worker is well positioned to become a shepherd leader (discussed shortly) rather than a warrior king.

Individual practice of reflection could further be supplemented during one's career by regular group "Schwartz rounds" where teams of workers discuss the ethical and emotional dilemmas of difficult jobs (Flanagan et al., 2020; Williamson et al., 2022). Moral reflective practices are not just important for frontline staff, but civilian staff who can experience high levels of distress (Lentz et al., 2022), and senior leadership who have the authority to address and apologise for organisational wrongdoing (Exline et al., 2007). Moral reflective practices set the ground for reconciliation through the mutual understanding and forgiveness between discordant parties (Brown, 2021; Hui et al., 2011). It has been argued that forgiveness is a no cost, relational activity, that when done from transcendent motives, and accompanied by repentance (change of hurtful behaviour) creates a more just and safer workplace (Bright et al., 2006; Dekker, 2018; Hui et al., 2011). A BPSS framework, therefore, must promote a process of humble self-examination, and self-awareness to attend to moral suffering.

Other research reports on how organisational stressors, such as poor culture and leadership, require proactive organisational level strategies to eliminate them (Blumberg et al., 2020; De Simone et al., 2019; Szoke AO & Allen + Clarke Consulting, 2022; Tarro et al., 2020). For instance, the World Health Organisation has recently reported that organisational and leadership interventions are vital in addressing workplace mental health (World Health Organization, 2022). Accordingly, the BPSS framework proposed in the current study includes organisational and leadership interventions that seek to eliminate betrayals, and therefore eliminate a psychosocial hazard, alongside individual reflective practices (Blumberg et al., 2020; Exline et al., 2007; Lentz et al., 2022; Phelps et al., 2022).

Organisational settings

The BPSS framework enables organisations to facilitate the above reflective practices in individuals, but not at the expense of organisational change. Organisations are increasingly being required to identify, assess, and control/eliminate acts that can commonly be perceived as betrayal, as will be discussed below. When organisational betrayals have occurred, leaders of organisations may reduce distress and rebuild trust by speaking truthfully, offering a sincere apology, and repenting from harmful behaviours (Hui et al., 2011; Shale, 2020; Woodhead, 2022). Repentance is a R/S virtue that is the act of turning away from harmful behaviours in concert with apology, because without change in behaviour apologies may cause more harm (Brown, 2021; Hui et al., 2011).

Poor organisational practices, such as complaints handling and poor recognition, were seen to be a factor leading to moral suffering. Organisational reactive strategies such as apology will have less impact than a systemic approach that eliminates harm through cultures that value reconciliation. “Just cultures” align with the PTR notion of generous covenant faithfulness, and directly address organisational injustice so often perceived as betrayal. Through a preference for reconciliation, the previously discussed concept of just cultures attend directly to blame attributions that are so harmful and then rebuild trust, reduce psychological distress, and make for a safer workplace (Dekker, 2013b, 2018; Heraghty et al., 2021; Mehnert, 2022). A “just culture algorithm” enacts practices that seek to understand how adverse events occurred, not who is to blame, provide pastoral care for staff under investigation for such events, and allow staff input to resolve issues (Dekker, 2013a). These just culture settings align with findings from the PTR that justice should value mercy and reconciliation.

The current study provided evidence of the harm caused by organisational injustice, how just cultures may prevent it, the industry consultation reported that only two participants had heard of just cultures. Consequently, it is fair to infer that many of the principles of just

cultures are not currently enacted in those organisations to prevent worker distress. No organisation mentioned wellbeing interventions that targeted harmful leadership behaviours as a cause of psychological distress, although many do have grievance reconciliation strategies. The BPSS framework proposed in the current study will leverage findings from the PTR that generous covenant faithfulness requires the creation of just cultures. Organisations that seek to reduce distress will do well to pursue an organisation wide just culture algorithm as well as the elimination of specific acts that cause moral suffering.

Leadership considerations

Frontline leaders within organisations regularly bear the brunt of the blame for perceived injustices (Gallegos et al., 2021). However, a just culture seeks to support and enable positive leadership not simply to blame them. It has been shown that interventions that support and train leaders are effective and have high returns on investment (Jones et al., 2012; Milligan-Saville et al., 2017; World Health Organization, 2022). Practical support is important to leaders, but the character and daily behaviours of the leader stand as foundations on which technical training stands (Australian Defence Force, 2018). The BPSS framework proposed in the current study includes an interdisciplinary approach to leader training and character development. For example, chaplains can address character and moral education, such as the education that has been conducted in the military since the Korean war (Sabel, 1981), while leader-peers can provide understanding and support, and psychologists provide professional supervision insights into helpful practices (Milligan-Saville et al., 2017).

Similar to the adoption of a guardian spirit in individuals, the PTR illuminated the need for an overarching identity for leaders as a shepherd leader. As previously mentioned, a shepherd leader is one that acts as a servant and sacrificially cares for those under their care to enable them to perform their work tasks and confront challenging situations (Roof, 2013). The PTR revealed that shepherds have nine key leadership behaviours. The adoption of a shepherding model and adoption of the nine key behaviours directly address the perceived lack of leadership that was raised in the qualitative research. The nine key leadership behaviours already described in the Results section and give the leader identifiable and practical tactics to enact the shepherd leadership model.

Wellbeing team considerations

The MDWTs that first responder organisations employ are central to the application of the BPSS framework. Firstly, because they contain the various disciplines that have the necessary suite of skills and experience to address the multi-factorial nature of moral suffering. They will best accomplish this through a commitment to inter-disciplinary collaboration (Choi & Pak,

2006). When new therapeutic capabilities are implemented, they should be assessed for efficacy and how they might not fragment person-centred and holistic care (Woods, 2017). The model of collaborative care is to be given preference over siloing that may occur in a step-care approach.

The members of MDWTs may need assistance in working as a team and overcoming any resistance to operating more collaboratively. For example, the use of simulation training of MDWTs is not widespread despite findings that it may increase performance and efficiency in multi-disciplinary teams in health settings (Long et al., 2019; Murphy et al., 2016). Finally, not only should these teams work together, but they should also have an increased role with high-risk departments, such as protocol units who award medals, return to work programs, WHS units, and professional standards units that investigate worker misconduct.

Identifying acts perceived as betrayal

While the culture change within an organisation is foundational, organisations will need to eliminate specific acts and entrenched cultures that are often perceived as betrayal. The qualitative results in the current study identified the kinds of practices that constitute PMIEs and PMICs for first responders. Several practices emerged, such as poor resourcing, work overload, lack of consistent recognition, organisational injustice, and poor support from leaders, which are all very distinct from trauma exposure. The PTR directly reflected on these practices to produce a sound theoretical and spiritual basis for preventing such harmful practices through organisational, leadership and individual interventions already mentioned.

Furthermore, the need for intervention strategies that effectively deal with these poor organisational and leadership practices has recently gained prominence (Blumberg et al., 2020; Roberts et al., 2021). Such need has also been made central to workplace psychosocial hazard guidelines recently developed in Australia and internationally (International Organization for Standardization, 2021; Safe Work Australia, 2022; SafeWork NSW, 2021; World Health Organization, 2022). A confluence between moral suffering and psychosocial hazards arose directly from the qualitative research and is discussed later.

The newly created context-based model that integrates religious and spiritual considerations

As previously mentioned, the BPPS framework advocated in this study aims to supplement the currently used biopsychosocial framework with spiritual elements in order to cover the prevention of the whole spectrum of work, induced psychological distress caused by trauma exposure and moral suffering. The extant research makes it clear, and so does the quantitative findings from the current study, that R/S matters are intimately linked to moral

suffering (Carey & Hodgson, 2018; Kinghorn, 2012; Litz et al., 2009; Molendijk, 2018; Nieuwsma, 2015; Phoenix Australia & Canadian Centre of Excellence -PTSD, 2020; Wortmann et al., 2017; Yeterian et al., 2019).

Quantitative data analysis showed a clear association between changes in spirituality, religiosity, and faith commitment with moral suffering. A perception of R/S stability, or mild growth in the R/S domains was associated with the lowest levels of moral suffering. The most elevated levels of moral suffering were associated with considerable decline in R/S domains, while considerable R/S growth was mildly associated with increased distress. Therefore, as previously alluded to, the biopsychosocial framework that is currently used in first responder organisations can be enhanced through the engagement of experts in R/S issues such as chaplains. When chaplains work collaboratively in a MDWT to address R/S issues, the prevention and treatment of psychological distress is likely to be enhanced.

As discussed above, a proposed BPSS framework that arose directly out of the research data uses the relevant spiritual concepts identified in the PTR to devise holistic primary prevention strategies. Such BPSS framework leverages a "context-based" model outlined by Cox et al. (2000) that addresses organisational stressors as well as what first responders experience out on the streets (Bishopp et al., 2016). Figure 10 represents the BPSS model that supplements the current biopsychosocial content model depicted in Figure 9. The content of traumatic experiences remains of importance, however, the new BPSS framework overcomes several shortcomings in the biopsychosocial model.

Moving from the left of Figure 10 to the right, we first note the more complex interaction of trauma with the development of moral suffering over the development of PTSD in the green circles. In the BPSS framework the role of the organisation and leaders in causing psychological harm is taken into account, with leadership interventions being of greater priority compared to individual interventions. Additionally, the moral, relational, and spiritual context of PMIEs and PMICs include all of the elements that were found to cause psychological harm in the current study.

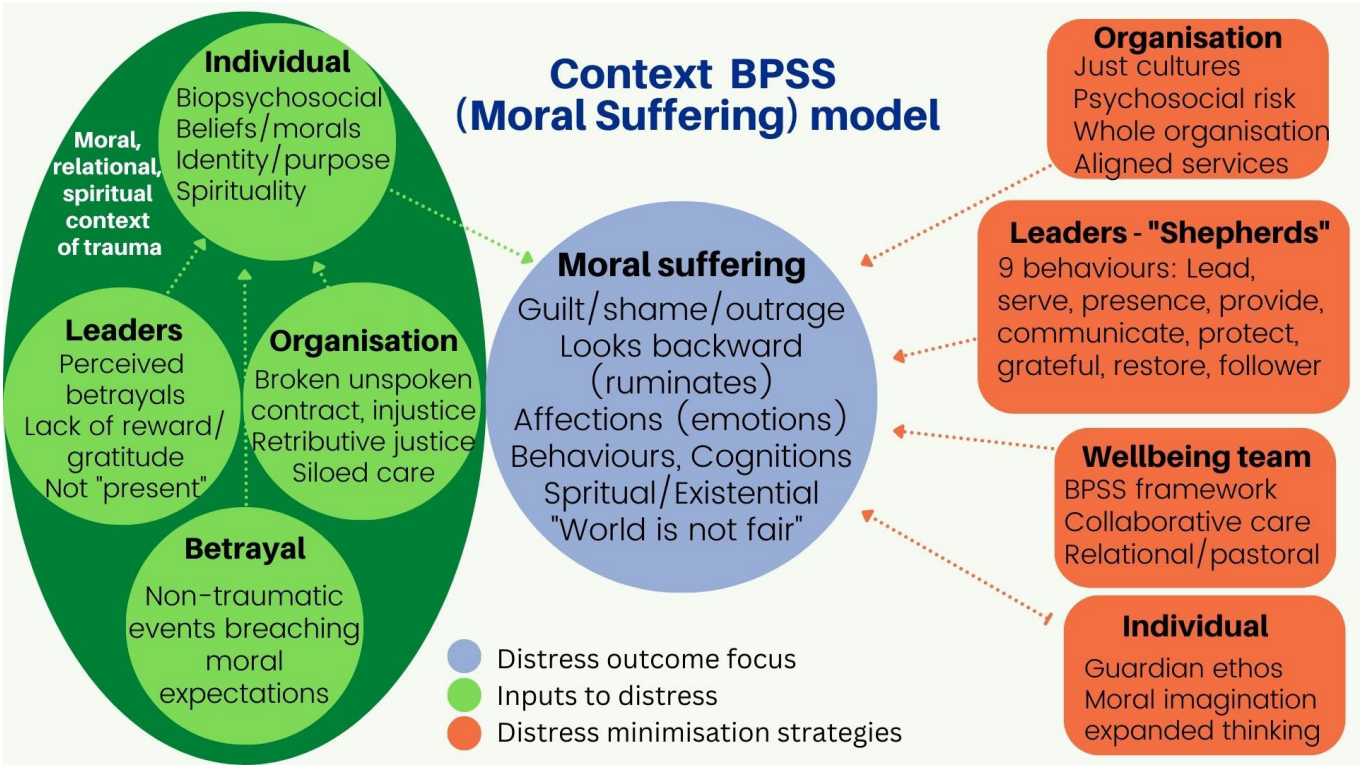

Figure 10. BPSS model that was developed to address moral suffering.

Note: Green circles represent the various elements of the work context and content that contribute to moral suffering. The orange boxes represent four elements of response to the context based moral suffering model. The enlarged "leader" circle depicts the primary importance of changing leadership behaviours to prevent and reduce psychological harm.

As results showed, individuals have underlying beliefs and morals that must be considered and attended to in the prevention and treatment of moral suffering. On the right-hand side, in the orange boxes, the BPSS framework provides practical strategies to address the causes of harms identified in this research and detailed above. Here the newly created BPSS framework provides practical strategies identified in the PTR to address organisational harmful cultures and practices using the four key elements presented above to prevent psychological distress. Additionally, these practices are undergirded by an identity position that provides a solid existential basis on which these behaviours are built. These four identities on which the activities rest are discussed below in the following order: 1) Guardian spirit; 2) Shepherd leaders; 3) Just cultures for organisations to create "safe pasture;" and 4) Collaborative wellbeing teams.

Organisational based intervention: Enacting "Just cultures"

Harmful workplace cultures can be prevented, reduced, or eliminated by implementing the following strategies,

1. Development of a just culture that prioritises organisational learning and restoration by:
    2. Establishing of a complaints system which includes pastoral care for those accused of wrongdoing,
    3. Implementing an inquisitorial approach to investigations that do not primarily focus on the individual but looks at systemic causes of events,
    4. Promotion of pastoral care for all those on return to work after injury,
    5. Prioritisation of truth telling, and employee voice at all levels of the organisation.
    6. Having systems in place to foster the development of gratitude at all levels of an organisation and address medals and awards system to have a person-centered approach that truly express gratitude for one's service.
    7. Ensure ALL departments integrate to have a person-centered staff wellbeing focus,
    8. Beware of creating unrealistic psychological contracts with recruits and workers, such as the notion of joining the "blue family". Psychological contracts refer to the unwritten, intangible agreement between employees and employers that defines the informal commitments, expectations and understandings that make up their relationship (Rousseau & Schalk, 2000).

Leader based intervention: Enacting "Shepherd leadership"

Psychological harmful leadership practices can be prevented, reduced, or eliminated by implementing the following strategies,

1. Allocation of resources to the recruitment, training, and ongoing support of appropriate caring leadership teams as a cost-saving wellbeing intervention.
2. Promotion of the shepherd leadership style that builds on a guardian identity for all individual workers.
3. Training, and support to express the nine key shepherd leadership behaviours,
    i. Confident leadership that displays vision, authority, and sincerity,
    ii. A servant hearted, sacrificial attitude,
    iii. Filial and gracious physical presence with those they lead,
    iv. Two-way communication that values active listening, asking, and truth-telling,
    v. The provision of physical and emotional needs of workers and facilitate pastoral care,
    vi. Protection of staff from harassment and organisational injustice,
    vii. Regular expression of gratitude to staff as enacted thankfulness,
    viii. Restoration and renewal of staff after wrongdoing, error, or conflict,
    ix. Continuing to be the follower of a higher authority,
4. Use of interdisciplinary and collaborative MDWTs to train leaders in key behaviours and leadership character development and maintenance.

Multiple discipline wellbeing teams (MDWTs): Enacting "Collaborative care"

1. Obtain from MDWT members a commitment to placing aside disciplinary rivalries and still a drive towards collaborative care for staff by promoting collective activities and training.
2. Commitment to building collegiality and mutual understanding among different professional groups within MDWTs.
3. Develop the capacity to facilitate the delivery of training and mentoring for the spiritually informed practices for organisations, leaders, and workers as best fits organisational needs.
4. Ensure programs are measured for effectiveness as they have been delivered.

Worker based interventions: Enacting a "Guardian spirit"

1. Procedures and guidelines must exist from workers' time of commencement with an organisation which encourage them to develop a strong identity as a guardian of society, and also of their fellow workers.
    2. These procedures and guidelines must encourage workers to engage in the reflective practice of "moral imagination" described above that allows self-examination and explicit adjustment to one's moral framework.
    3. In addition, workers and leaders must be encouraged to engage in "enlarged thinking" exercises where they are placed in the viewpoint of a position they do not hold. By doing so, leaders will gain a clear understanding of the impact of decisions on subordinates, and vice versa.
    4. These two practices must be done as a way to foster forgiveness of self and others after perceived betrayals.
    5. The adoption of "Schwartz rounds" where small groups of staff can safely discuss the impacts of ethically or emotionally challenging situations.
    6. To have greater impact, these practices are to be implemented and evaluated through interdisciplinary collaboration of MDWTs.

Overcoming barriers to the "spiritual element" of the BPSS

The PTR showed that spiritually informed strategies have much to offer in the prevention of moral injury in secular contexts. Yet there can remain objections and barriers to utilising the wisdom acquired from faith traditions. There can remain an objection that spirituality may be used to promote religious beliefs. Additionally, it has been asserted that a lowering of religiosity in Australia may infer that R/S based interventions lack ongoing relevance (Hoglin, 2021). However, these concerns arise not so much from evidence but from pre-existing notions of the nature of secularity and the traditional connection of spirituality and religiosity. However, as alluded to in earlier in this report, recent research, including the consensus definition of spirituality mentioned earlier, highlights that religion is not logically or practically necessary in the expression of spirituality (Grimell, 2017; Koenig, 2008; Puchalski et al., 2014; Smith-MacDonald et al., 2017).

For example, there are numerous examples of prevention strategies that are spiritually and religiously informed, but they do not produce preferential treatment of specific religions. It is noted that mindfulness and meditation derive from 7th step of the Eightfold path of Buddhist enlightenment and are regularly used as therapeutic interventions in secular contexts without any requirement to believe in other tenents of Buddhism (Hafenbrack et al., 2021; Koenig et al., 2022). Similarly, the widely accepted model of servant leadership widely taught in business

schools has its foundation in the words and actions of Jesus Christ, yet its implementation does not require conversion to Christianity (Sen & Sarros, 2002).

Additionally, in addressing the possible irrelevance of R/S interventions in a secular society, the quantitative data showed that the vast majority of participants (73.3%) affiliated with some kind of spiritual position from agnosticism to faith in a specific deity (See Table 8). This aligns with recent Australian research showing that 68% of Australians have a spiritual or religious connection (McCrindle, 2017). Additionally, of the 26.7% who identified as atheist, only 36% of them say their upbringing was atheist, meaning they may maintain a religious residue in the moral frameworks (Van Tongeren et al., 2021). The consensus definition of spirituality (see definitions) allows for a non-religious description of spirituality that is appropriate for addressing matters of identity and meaning for religious and secular people alike (Puchalski et al., 2014). The inclusion of R/S factors in a BPSS framework remains highly relevant to the vast majority of first responders in Australia.

Attending to the spiritual and religious struggles of employees need not to be divisive, and indeed it is essential in addressing serious health issues including moral suffering (Balboni et al., 2022; Burkman et al., 2022). Research regularly shows that attending to spirituality has a range of other organisational benefits, such as increased organisational citizenship behaviour (Giacalone & Jurkiewicz, 2010). Accordingly, when spiritual interventions that feature moral self-awareness and forgiveness are also utilised in a BPSS framework, it may lead to reducing absenteeism, presenteeism, and workplace deviance, that might have manifested as acts of vengeance for perceived injustice. However, care has to be taken to ensure that religious dogmatisation and proselytisation are not included in a BPSS framework.

As seen in the industry consultations, barriers to implementing spiritually informed practices can arise from divisions in MDWTs in first responder organisations. Many new therapeutic regimes that incorporate R/S factors are increasingly being recommended to treat moral suffering (Antal et al., 2019; Carey et al., 2016; Cenkner et al., 2020; Pyne et al., 2019). These programs recommend the close collaboration between chaplains and psychologists in a therapeutic alliance that industry consultation revealed is not currently occurring in Australian first responder settings.

The recommended collaboration between members of MDWTs stands in contrast to the often-siloed provision of care that a stepped-care approach makes possible. Teams can develop rivalries as Avgoustidis (2008, p. 31) notes, “conflicts between psychiatrists and psychologists, psychologists and social workers, psychiatrists and chaplains, chaplains and nurses, or

between any other permutation of professionals, including oppositions even between priests and chaplains, are undermining the outcome of a global approach of the suffering individual who needs all of them". Disturbingly, the qualitative findings revealed distress can be increased when services are not well-integrated. A shift towards holistic, person-centred model of collaborative care is achievable only when MDWTs act in an interdisciplinary manner to better address worker distress (Choi & Pak, 2006; Loving, 2021). Therefore, in light of this evidence, the BPSS framework here preferences a collaborative care approach where disciplinary rivalries are abandoned in the quest for holistic person-centered care.

The BPSS framework: implications for current psychosocial risk guidelines

Psychosocial safety in the workplace is a concept that recently became the focus of many efforts to create a psychologically healthy workplace, with guidelines to prevent psychosocial hazard in the workplace recently being released in NSW and abroad (International Organization for Standardization, 2021; Safe Work Australia, 2022; SafeWork NSW, 2021). There is a recognition that workplace psychological hazards arise not only from the content of an employee's work but also from poor organisational practices (Becher & Dollard, 2016). The moral suffering identified in the current study is a neglected psychological condition that can also result from poor psychosocial safety practices in the workplace. Therefore, it should also be considered in any effort to create a mentally healthy workplace including psychosocial guidelines for the workplace.

The PMIEs and PMICs most often described by research participants largely overlap with identified psychosocial hazard categories in the above-mentioned workplace psychosocial hazard guidelines (International Organization for Standardization, 2021; Safe Work Australia, 2022; SafeWork NSW, 2021). It is noted that moral suffering and psychosocial hazards have not generally been considered together for the purpose of reducing psychological harm in the workplace.

Table 11 displays the congruence between PMIEs reported by research participants in the current study and current psychosocial hazards in the SafeWork NSW guidelines (International Organization for Standardization, 2021; Safe Work Australia, 2022; SafeWork NSW, 2021). The left-hand side of Table 11 contains the major coding themes from the narrative analysis from the current research. On the right of Table 11 are the corresponding psychosocial hazard categories (SafeWork NSW, 2022)

Table 12. Qualitative codings for events that lead to harm matched with psychosocial risk categories from SafeWork NSW workplace psychosocial hazards guidelines (2021).

Qualitative code for PMIEs	*Psychosocial risk categories*
Civilian dissonance around death	*Exposure to trauma, low job control*
Attending events with vulnerable groups as victims or particular suicides	*Exposure to trauma*
Resources: inadequate equipment and excessive workload	*Role overload*
Current system of reward and recognition (medals) can be harmful	*Inadequate reward and recognition*
Poor leadership practices (communication: especially inactive listening)	*Poor support from supervisors and managers. Conflict or poor workplace relationships between workers and their supervisors and managers and co-workers*
Poor justice through the system of complaints and investigations	*Poor procedural justice*
Poor justice through the systems of return to work and workers compensations: role of insurance companies	*Poor procedural justice*

a: Psychosocial hazard types identified in the Australian code of practice for managing psychosocial hazards at work (Safe Work Australia, 2022)

When psychosocial risk and moral suffering frameworks are synthesised, benefits arise for both frameworks in the creation of a mentally healthy workplace. Synthesis provides moral suffering with a system that operationalises PMIEs as categories of hazards and then connects them to primary prevention strategies that can be practically implemented across a broad range of workplaces. In addition, an understanding of moral suffering resulting from workplace practices adds an anthropological breadth that includes spirituality as a powerful mechanism for preventing the psychologically harmful human experience of workplace betrayal. It also provides an ontological depth that accounts for complex human responses to the sense of betrayal and more fully plumbs the harmful impacts of betrayal perceptions that were reported in the qualitative findings. Therefore, an understanding of moral suffering may assist in the investigation of psychosocial safety complaints that are often assigned labels that fail to capture the nuances or complexity inherent in those complaints (Popple et al., 2021).

In order to incorporate the causes of moral suffering as psychosocial hazards in the workplace, the BPSS framework incorporates two important paradigm shifts. Firstly, physical, social, psychological, and spiritual wellbeing must all be addressed through the delivery of preventative intervention strategies, as a collaborative approach to wellbeing in the workplace. For example, psychologists and chaplains both have a role to play in the support

and training of leaders and character development, and reflective practices, such as moral imagination. Such intervention strategies must also be delivered in concert with the clinical and therapeutic responses to distress (Kreh et al., 2021). This would be most helpful as psychosocial safety prioritises true primary prevention strategies that include elimination of organisational stressors that in the current study have been conceived as betrayal (Beyond Blue Ltd., 2018).

Secondly, psychosocial preventative strategies within organisations must consider the R/S associations inherent in moral suffering that form part of the qualitative findings from the current study. These findings include the loss of identity through a sense of abandonment and inner moral confliction, along with spiritual decline that can attend betrayal and trauma related to vulnerable people. Another example is the way in which recognition is given to staff. First responder organisations regularly give medals for the most harrowing day of a worker's life, but rarely include pastoral support. This support is needed as workers can feel ashamed of receiving a bravery award on a day, they were afraid, or when medals are given for the same event for which they came under investigation. These two shifts in wellbeing responses pave the way for a holistic context-based model capable of addressing psychological harm in the workplace. The bridge between psychosocial hazards and moral suffering is the implementation of a BPSS framework that allows a holistic preventative strategy.

Limitations

The current research has several limitations. First, it was conducted during the COVID-19 pandemic, which spread the data collection over a long period of time. The pandemic may have also impacted the responses to the survey and the interviews as it was a period of heightened distress for first responders, meaning they may have less relevance outside of COVID-19 scenario. However, all but one of the books were written and published prior to the pandemic, somewhat safeguarding the narrative analysis from COVID-19 impacts. Second, the larger group of participants self-selected to participate and may have done so because they were distressed and may therefore not represent first responders generally. Finally, the researcher is a former first responder and current chaplain who is well-connected in the first responder community. Recruitment may have been skewed towards those known to the researcher (although not one person has informed the researcher of their participation) or have a religious affiliation. However, the high number of those reporting as atheists may speak against this limitation.

Conclusion

The findings of this research highlight that the events associated with the formation of moral suffering correspond closely with categories contained in the psychosocial hazard reduction guidelines released by SafeWork NSW and other Australian jurisdictions. It will be important that moral suffering research take account of psychosocial risk guidelines and that psychosocial hazard reduction strategies incorporate strategies that are recommended to alleviate and prevent moral suffering.

Breaches of psychosocial hazard guidelines can be perceived by first responders, not just as safety risks, but as betrayals of their moral framework, especially when impacted by regular contact with death and trauma. The current study promotes the adoption of a BPSS framework to prevent moral suffering, which can enhance psychosocial hazard reduction strategies. Organisational, clinical, and pastoral responses to moral suffering will conversely also be enhanced by the adoption of WHS risk mitigation strategies that aim to eliminate the perception of betrayal. Indeed, a BPSS framework provides a vital bridge between moral suffering and psychosocial hazard reduction strategies that are capable of preventing psychologically harmful behaviour in the workplace. First responder organisations may profit from formal assistance from relevant Government agencies to adhere to truly holistic psychosocial hazard reduction guidelines.

Finally, the context based BPSS framework provides practical organisational and leadership interventions that can potentially eliminate events considered as workplace betrayal. Focusing on trauma or organisational stressors in isolation from the spiritual element fail to address the whole spectrum of psychological distress in the workplace. A “whole of organisation” approach is needed to address moral suffering, where those of differing expertise work together to enact the holistic BPSS model.

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Appendices

Appendix 1: List of auto/biographies consulted for narrative analysis.

Author	*Year*	*Title*	*Service type*
Bruce, A	*2019*	*The firefighter blues*	*Firefighter*
Edwards, G.	*2019*	*The strong man: A powerful story of life under fire and one man's journey back from the brink*	*Police*
Ford, J.	*2018*	*The good cop: The true story of Ron Iddles, Australia's greatest detective*	*Police*
Fox, P.	*2019*	*Walking towards thunder*	*Police*
Gillard, S., & Harkness, L.	*2017*	*Life sentence: A police officer's battle with PTSD*	*Police*
Gilmour, B.	*2019*	*The gap: A paramedic's summer on the edge*	*Ambulance*
Hardiman, C.	*2020*	*Ten feet tall and not quite bulletproof*	*Police*
Hayes, T.	*2014*	*An outback nurse*	*EMS*
Hillman, K.	*2010*	*Vital signs: Stories from intensive care*	*EMS*
Hodge, D.	*2019*	*A life on the line: A MICA flight paramedic's story*	*Ambulance*
Kennedy, P.	*2000*	*You must see some horrible things: Australian ambulance officers at work*	*Ambulance*
Lal, T. J.	*2015*	*Standing on my brother's shoulders: Making peace with grief and suicide -A true story*	*Firefighter*
Macken, S.	*2018*	*Paramedic: One woman's 20 years of the front line*	*Ambulance*
McKay, E.	*2006*	*Crime Scene*	*Police*
McShane, N., & McHugh, E.	*2016*	*Outback cop: The colourful life and times of the Birdsville policeman*	*Police*
Neil, B.	*2014*	*Under siege: Murder, negotiation, and courage - one detective's story*	*Police*
Nicholas, D. R.	*2017*	*Top cop: Chief Inspector Gary Raymond*	*Police*
Schanssema, E	*2016*	*Signal 8: An Australian paramedic's story*	*Ambulance*
Sparkes, A.	*2013*	*The cost of bravery*	*Police*
Stevens, B	*2018*	*Rescue paramedics: True-life stories of front-line paramedics*	*Ambulance*
Wild, A	*2021*	*The care factor: A story of nursing and connection in the time of social distancing*	*EMS*

Appendix 2: Online survey questions

Consent		
Questions	**Response**	**Response type**
Complete this computerized survey that captures anonymous details about my age, sex, service length and type, as well as questions about my experience of trauma and betrayals, spirituality and religious leanings, and three modified scales that measure the impacts of morally confronting circumstances. I am aware of who and how to contact the researchers to have questions answered to my satisfaction. Do you agree with the above statements and give your consent?	• Yes • No	Select one

Demographics		
Questions	**Response**	**Response type**
Please indicate your gender	• Male • Female • Prefer not to say. • Other	Select one
In which age bracket are you?	• Under 25 • 25-29 • 30-34 • 35-39 • 40-44 • 45-49 • 50-54 • 55-59 • 60-64 • 65 or over	Select one
What emergency service(s) have you served in, either in a voluntary or paid role?	• Fire fighting • Ambulance • Emergency or general medicine • Rescue	Select one
What is your *total* length of service in first responder and/or health worker roles (in years)		Provide number
Are you still serving actively in a first responder role or in a health organisation?	• Yes • No	Select one
How did you hear about this survey?	• Through social media. • Through a friend.	Select all that apply

	• Through union communication. • Through my employing organisation. • Other	
Faith, spirituality and religion		
Questions	**Response**	**Response type**

8. Many people have a spiritual, religious or faith based upbringing and current experience. How would you *currently* describe yourself?	• Religious - identifying with a named religion
	• Spiritual - not necessarily believing in a specific divine being or god.
	  • A person with an active faith in a specific divine being or god.
	  • Agnostic
	  • Atheist
	  • Other (please specify)
		Select all that apply

9. How would you describe your *upbringing*? (Please select all that apply)	• Religious - identifying with a named religion • Spiritual - not necessarily believing in a specific divine being or god. • A person with an active faith in a specific divine being or god. • Agnostic • Atheist • Other (please specify)	Select all that apply
10. Which (if any) of the following practices do you find helpful?	• Meditation • Mindfulness • Prayer • Church or other religious ceremonies • Religious or other spiritual based community	Select all that apply

	engagement Reading sacred or holy books such as The Bible or The Koran • Reading spiritual or religious books • Private or interpersonal confession and/or forgiveness • Other (please specify)	
11. Which (if any) of the following practices do you find *unhelpful*?	• Meditation • Mindfulness • Prayer • Church or other religious ceremonies • Religious or other spiritual based community engagement • Reading sacred or holy books such as The Bible or The Koran • Reading spiritual or religious books • Private or interpersonal confession and/or forgiveness	Select all that apply

Changes in faith, spirituality and religion		
Questions	**Response**	**Response type**
12. As a result of your work as a first responder, how do you feel your spirituality has changed.	• It has grown considerably • It has grown a little • There has been no change • It has diminished a little • It has diminished considerably	Select all that apply
13. As a result of your work as a first responder, how do you feel your religious beliefs have changed?	• They have grown considerably • They have grown a little • There has been no change • They have diminished a little • They have diminished considerably	Select all that apply
14. As a result of your work as a first responder, how do you feel your has changed?	• It has grown considerably • It has grown a little • There has been no change • It has diminished a little • It has diminished considerably	Select all that apply
Faith-based, spiritual or religious guidance		
Questions	**Response**	**Response type**
15. During your service were you ever *offered* any faith-based, spiritual or religious guidance from any of the following?	• No guidance or help was offered Chap-lain • Spiritual or religious leader in the community • Psychologist • Peer support	Select all that apply

	• Friend or family member • Other (please specify)	
16. During your service did you *actually make use of* any faith-based, spiritual or religious guidance from any of the following?	• No guidance or help was received • Chaplain • Spiritual or religious leader in the community • Psychologist • Peer support • Friend or family member Other (please specify)	Select all that apply

Faith-based, spiritual or religious guidance		
Questions	**Response**	**Response type**
17. How helpful was the guidance you received?	Not at all helpful Extremely helpful	Select on a slider

Traumatic and moral experiences		
Questions	Response	Response type
18. Approximately how many times during your career as a first responder did you *attend or investigate* 'traumatic' events (including death, threatened death, actual or threatened serious injury, actual or threatened sexual violence)?	• Fewer than 10 • 10 - 50 • 51 - 100 • 101 - 200 • More than 200	Select an option
19. Approximately how many times during your career as a first responder were you the victim of 'trauma' (including threatened death, actual or threatened serious injury, actual or threatened sexual violence)?	• Fewer than 10 • 10 - 50 • 51 - 100 • 101 - 200 • More than 200	Select an option
20. Approximately how many times during your career as a first responder did you attend or investigate events that involved actions by a member of the public that were against your moral convictions?	• Fewer than 10 • 10 - 50 • 51 - 100 • 101 - 200 • More than 200	Select an option
21. Approximately how many times during your career as a first responder did a manager or organisational constraints require you to act contrary to your moral convictions?	• Fewer than 10 • 10 - 50 • 51 - 100 • 101 - 200 • More than 200	Select an option
22. Approximately how many times during your career as a first responder	• Fewer than 10 • 10 - 50	Select an option

did you feel betrayed by a manager, a colleague or systems/people in your organisation?	• 51 - 100 • 101 - 200 • More than 200	
23. Approximately how many times during your career as a first responder do you now feel that you acted contrary to your moral convictions?	• Fewer than 10 • 10 - 50 • 51 - 100 • 101 - 200 • More than 200	Select an option
Perceived injustice		
Questions	**Response**	**Response type**
24. Using the scale, please indicate how often you experience/d each of the following thoughts and feelings when thinking about the impact your service has had on your wellbeing	1. Most people don't understand how severely my wellbeing has been negatively affected. 2. My life will never be as good as before my service. 3. I suffer as a result of someone else's negligence. 4. No one should have to live the way I now have to. 5. I just want my life back. 6. I feel my service has negatively affected my wellbeing in a permanent way. 7. It all seems so unfair. 8. I worry that the negative impact of my service on my wellbeing is not being taken seriously. 9. Nothing will ever make up for all that I have gone through. 10. I feel I have been robbed of something very precious.	(For each question) Choose from • Never • Rarely • Sometimes • Often • All the time

	11. I am troubled by fear that I may never achieve my dreams. 12. I can't believe my wellbeing has been as badly affected as it has.	
Expression of moral injury scale		
Questions	**Response**	**Response type**
25. When considering your own feelings, beliefs and behaviours related to things that you did/saw during your service, please indicate how much you personally agree or disagree with each statement:	1. I am ashamed of myself because of the things that I did/saw during my work as a first responder. 2. I feel anger over being betrayed by someone I had I trusted while I worked as a first responder. 3. My time as a first responder has taught me that it is only a matter of time before people will betray my trust. 4. Because of things I did/saw as a first responder, I doubt my ability to make moral decisions. 5. In order to punish myself for things I did/saw as a first responder, I often neglect my health and safety. 6. I sometimes enjoy thinking about having revenge on persons who wronged me as a first responder. 7. I feel guilt about things that happened during my work as a first responder and that cannot be excused.	(For each question) Choose from • Strongly disagree • Disagree • Neither agree nor disagree • Agree • Strongly agree

	8. Because of things I did/saw as a first responder, I am no longer worthy of being loved. 9. My experiences as a first responder have caused me to seriously doubt the motives of people in authority. 10. The moral failures that I witnessed as a first responder have left 11. a bad taste in my mouth. 12. I sometimes feel so bad about things I did/saw as a first responder that I hide or withdraw from others. 13. Because of the things I did/saw as a first responder, I sabotage my best efforts to achieve my goals in life. 14. No matter how much time passes, I resent people who betrayed my trust during my work as a first responder. 15. I am an unforgivable person because of the things I did/saw as a first responder. 16. Things I saw/did as a first responder have caused me at times to lose faith in the basic goodness of humanity. 17. I sometimes lash out at others because I feel bad abut things I did/saw as a first responder. 18. When I look back at my service as a first responder, I feel disgusted by the things other people do.	

Moral distress		
Questions	**Response**	**Response type**
26. From the Moral Distress Thermometer pictured, please indicate the number that best describes how much moral distress you experienced from not being able to pursue the right course of	Moral distress thermometer • None • Mild • Uncomfortable • Distressing • Intense • Worst Possible	Choose on a scale from 1-10 with increasing distress.
27. From the Moral Distress Thermometer pictured, please indicate the number that best describes how much moral distress you have experienced *in the last 2 weeks* (including today) from not being able to pursue the right course of action	Moral distress thermometer • None • Mild • Uncomfortable • Distressing • Intense • Worst Possible	Choose on a scale from 1-10 with increasing distress.