International Journal of Medical Toxicology & Legal Medicine Volume 27, No. 4, 2024
e-ISSN: 0974-4614
p-ISSN: 0972-0448

Empathy and Trauma in Ambulance Paramedics: Navigating Human Tragedy

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Received: 15.07.2024 Revised: 13.08.2024 Accepted: 11.09.2024

ABSTRACT

Introduction: The profession of ambulance paramedicine presents many rewarding life experiences, while simultaneously presenting healthcare practitioners with the potential for experience of repeated exposure to human tragedy. A paramedic is often the first person on scene for traumatic accidents, cardiac arrest, stabbings, or cases of child abuse. All of these situations test the professionalism of the practitioners. Pre-hospital injury and illness is often unexpected and traumatic for patients and emergency witnesses and can elicit strong emotional reactions common during trauma. Paramedics use their clinical diagnostic and technical skills to efficiently manage a wide variety of medical situations. However, regardless of the clinical skills or paramedic experience of the practitioner, outcomes for patients and witnesses may not always be good, and the person attending the incident may be left feeling markedly different than at the commencement of their shift. Surprisingly little is known about the psychological impact of service as an ambulance paramedic and how practitioners manage this stressor

methods: Ambulance paramedics are trained not only in medical skills but also in caring behaviours, which are integrated into national curricula. However, various professional and personal contexts create constraints that impact their empathy and motivation. This study utilized three focus groups with 11 paramedics of differing experiences, applying Braun & Clarke's six-phase method for thematic analysis. Three key themes emerged: 'applying stoic professionalism as an emotional shield,' highlighting the need to protect themselves from emotional labour; 'compassion fatigue: when caring decays to coping,' showing a decline towards dehumanization of patients and colleagues; and 'disenfranchised grief: loss of human connection,' reflecting grief from distancing themselves from normal empathetic responses. Despite the challenges, emergency medical services remain essential first responders to tragedies, facing the emotional toll of their role amid human suffering.

conclusion: Most of the time, the world is a great place to live. However, occasionally, something horrible occurs, and humankind is reminded of how twisted it can be. For some, it is a horrible traffic accident, a domestic violence incident, or a drowning. Whatever the case may be, slight comfort can be taken from the fact that someone is on their way to fix it all, even if this comfort is but a tiny shade of forgiveness for the human race. Although there are many perspectives on the relationship between empathy and trauma among ambulance paramedics, the ultimate goal is to explore the factors that weaken or, more appropriately, strengthen the capacity to empathise with distressed patients. For those who have not only been trained to deal with human catastrophe but take it upon themselves to ensure that the species survives and heals, it is both a blessing and a curse .

Keywords: Human, Paramedics, occasionally, professionalism

2. Understanding Empathy

Empathy is a complex, multidimensional concept consisting of both cognitive and affective (emotional) aspects. Affective empathy refers to the tendency to experience the feelings of others, while cognitive empathy refers to the ability to understand the experiences and feelings of others and being able to relay that understanding back to them (Williams et al., 2017). Another key component of empathy is self-other differentiation, which is the ability to separate one's own emotions from those of the other person, which may improve objectivity and help to reduce anxiety and distress.

Different conceptual forms (state, trait, etc.) and measures of empathy use different definitions and scales. State affective empathy is typically measured using psychological scales and involves a bounded timeframe. State cognitive empathy is commonly operationalized by questions asking about the ability to detect other people's

goals and intentions and tends to use true/false formats. A cluster of components concerning the habitual propensity to empathize, mainly influenced by personality, is designated trait empathy and connected to the empathizing–systemizing theory of sex differences in cognition. Trait affective empathy is commonly measured using self-report questionnaire scales, which includes subscales for both cognitive and affective empathy. Trait cognitive empathy is typically assessed via questions asking about the habitual propensity to empathize, or the ability to understand internal states of others. Trait empathizing possesses a cognitive and an affective dimension as well, although it does contain other components such as emotion regulation.

The belief that empathy is facilitating in and desirable in health-care professions, including ambulance paramedics, is widespread. Empathy is widely accepted to be an important component of health care, as it leads to better patient outcomes and increased patient satisfaction. Empathy is also believed to confer benefits to clinicians, including satisfaction with and enjoyment of difficult encounters, a sense of greater accomplishment, and a preference for more challenging cases. Lower levels of empathy result in greater frequency of malpractice suits and decreased patient satisfaction, particularly amongst vulnerable populations, and would seem to be a disadvantage in paramedic work.

2.1. Definition of Empathy

Empathy is a complex, multidimensional concept consisting of both cognitive and affective aspects (Williams et al., 2017). Affective empathy refers to experiencing the feelings of others. In comparison, cognitive empathy is the ability to understand, at a cognitive level, the experiences and feelings of another, and being able to relay that understanding back to that other person. Another key component of empathy is self-other differentiation, which is the ability to separate one's own emotions from those of the other person; this is seen as an important way of regulating empathy levels. Poor self-other differentiation results in an unmanageable level of empathic concern for others' suffering, as one becomes overwhelmed by the feelings of others and is unable to regulate that experience. Empathy is widely accepted to be an important component of health care. Higher levels of empathy lead to better patient outcomes and increased patient satisfaction, whilst lower levels of empathy result in a greater frequency of malpractice suits and decreased patient satisfaction. Additionally, in the paramedic context, it has been reported that empathy not only improves patient outcomes but also improves psychological outcomes for families who have lost a loved one.

Empathy is also involved in propensity for vicarious trauma, with greater levels of empathy associated with greater likelihood to experience vicarious trauma. Paramedics engage with some of society's most extreme tragedies on a near daily basis, leading to the potential for compassion fatigue, burnout, and PTSD. Early interventions for newly graduated paramedics have been suggested to limit the potential for later psychological problems as they learn to navigate such tragedies. Paramedics are involved in high-stakes situations where they are tasked with performing medical care outside of the safety and comfort of a clinical environment. On the road, paramedics must self-manage all aspects of patient care and decisions. These decisions are often made in 30-second windows, such as whether to treat a patient's arm injury or transport to a trauma centre.

2.2. Types of Empathy

Empathy is a complex construct, comprising cognitive and affective components (Williams et al., 2017). Affective empathy involves experiencing the feelings of others, usually accompanied by an urge to help (van Dijke et al., 2020). Hedonic empathy occurs when someone else's feelings of pleasure are experienced as a pleasant arousal. Cognitive empathy is the ability to comprehend the experiences and feelings of others. It allows someone to understand why someone else is angry or sad, for instance, without experiencing the emotion felt by that other person. Sepal and other-circumstance awareness is closely related to self-other differentiation, which involves the ability to separate one's own emotions from those of the other person. Eye movements, facial expressions, prosody, and bodily movements all help convey emotional signals facilitating empathy.

The recognition and understanding of someone else's mental state are essential for the development of empathy. The receiver must be aware of the other's feelings, cognitions, and intentions. Cognitive empathy is also presumed to be a prerequisite for affective empathy. Affective empathy would be hampered when someone has a limited understanding of the other's emotion. It might be too easily confused with normal pro-social feelings. Deficits in cognitive empathy might lead to disconnection from others and impairments in affective empathy. Likewise, self-differentiation is linked to affective empathy. In a reciprocal relationship, a person can only empathize with the feelings and emotions of the other when aware of one's own thoughts and feelings.

2.3. Importance of Empathy in Healthcare

Healthcare professionals align themselves to various constructs within the healthcare system and engage in emotional exchanges with patients and colleagues. Such engagement creates potential ethical dilemmas and implicates the demonstration of resilience. Paramedics are an emergency healthcare professional group found within the pre-hospital environment. This is a demanding workplace with shift work involved. Paramedics are exposed to various scenes of human tragedy, mass casualty incidents, and terrorist attacks. In addition to the

exposure to trauma, paramedics engage in heavy emotional demands to compassionately care for patients who may be experiencing their most traumatic moments. Such exposure impacts on mental health. Hence, paramedics are required to navigate trauma, compassion, and empathy all whilst maintaining societal expectations and moral resilience. This qualitative study adopts a phenomenological approach to explore how experienced ambulance paramedics cope day-to-day with such demands. Paramedics underwent one semi-structured interview that was analysed. This paper presents the key findings relating to compassion and empathy, which were recurring themes and forms of burdensome emotional labour encountered and engaged in by paramedics dealing with the traumas of others (Jennings, 2017).

Compassion and empathy are at the forefront of society's expectations for paramedics after they respond to traumatic events (empathy in particular). Paramedics describe a range of approaches for dealing with compassion and empathy. At times, these approaches are effective coping strategies, with little consequence to their broader lives. At others, paramedics describe the burden of compassion and empathy core to who they are. This burden manifests into side effects such as compassion fatigue and burnout. These findings suggest the expectation of compassion and empathy on paramedics post-trauma is a complex emotional process not well understood, posing an ethical dilemma for paramedics and the broader society. Future research is needed to further explore the experience of empathy in paramedics dealing with the trauma of others, and to develop understanding of the ethical dilemma it poses. Paramedics provide a unique perspective as they conduct large volumes of work in rapidly evolving disasters, and on a wide range of events producing significantly varied levels of trauma.

3. The Role of Paramedics

While attending the scene of a robust incident bronchospasm was evident in a woman in her 70s. As they close the gap and are fully committed this paramedic immediately sickens. Starting with a tightening in the chest over the next few moments her heart rate spirals, the palms of her hands sweat profusely and a huge sense of dread settles in. The symptoms feel overwhelming and just prior to arriving she is concerned about passing out. She noticed these same symptoms few months earlier when her own father died in a tragic manner and had been investigated by the doctor since but everything was fine. Now transported back to that scene the emotional nucleus is bright red and alive once more. Focusing on the frame that surrounds her through the windscreen she takes in the absolutely serene view of the small quaint village, the golden wheat fields lightly dancing in the soft breeze, the rolling hills with the characteristic tree tops dotted throughout. The view does very little to ease her stomach which feels like she has jumped out of an airplane without a parachute. On arrival the ambience immediately changes. A firefighter walks over to the road to divert the traffic; onlookers eyes are fixed on the paramedics in a morbidly intrigued fashion; an elderly woman is comprehensively discussing her ill health with another first responder; and a group of eight or so curious bystanders have clambered up high onto the other side of a fence to gain a better view of what is happening. Instantly their sense of humour becomes weirdly solemn and their game of reassuring one another, "At least you're still safe," seems almost cruel. The crew marches across the long grass of a paddock and approach the old woman in black track pants who is gasping for air. A paramedic decides to run back to the ambulance for the oxygen and nebuliser. Jackets are soon deployed in the gravel to provide a comfortable surface. An oxygen supply is quickly established. She initially notes the many potential dangers around the patients neck, but for the first time as the patient's reverence becomes evident those worries subside.

3.1. Responsibilities of Paramedics

When a person becomes ill or is injured, they usually depend on a family member, friend, or another person to take them to the hospital or will call an ambulance service. This simple act is deeply revealing of the nature of a health care system based on professional parameters. Such a system contains implicit meanings and provisions about the demonstrations of responsibility of health care professionals, values of human life, moral imperatives, compassion, scientific knowledge, social skills, and mandated qualifications for performing specific tasks. These high-level understandings are put in place by each society in light of its collective life, history, and ethical principles. In any society, there is a pre-understanding of the unavoidable human tragedy. This nagging dark side of life implies death, sicknesses, accidents, and some others ((Jennings, 2017)). The encounter of ordinary persons with a health care system reflects human tragedy. How many "mothers have been ripped off a job or a family visit on the road because of a heart assault, a stroke, or an accident involving a bull barred van?" Phillips and Pommier make some naive comparisons that expose a reflection on personal destiny and on the same reasoning for all other stakes (to trade, to act, and so on). Hence, the human tragedy is a presupposed understanding common to the vast majority of persons on earth. Nevertheless, the pre-understanding that "stupidity has its limits" is not universal ((Goad, 2018)). To call an ambulance means an appeal to the logic against stupidity. From simple medical knowledge to deep biological and social facts, many things about human life and health care are understood and accepted for the great usability. Understanding the unpredictability of such accidents is a rational and emotional puzzle. It is a kind of unexplainable tragedy befalling on somebody

else in spite of his/her skillfulness. In contrast, there is a professional understanding that human life, health care, individuals, family, and society are terribly demanding in terms of responsibilities. Thus, the very first call for an ambulance can be seen as an unavoidable confrontation between an ordinary person and a traumatized professional movement (including the dispatcher, the paramedics, the first responders, and the emergency department nurse). The chain of responsibilities is at stake. In response to the call of an ambulance, many things will be done. Many decisions will be made. Many events will take place. This short moment is the beginning of a trauma (i.e. an experience involving serious bodily injury or a major shock to the system) on the side of the involved agents.

3.2. The Nature of Emergency Response

First responders and emergency response agencies worldwide are faced with the challenge of an ever-increasing array of needs within the communities they serve. A wide range of care tasks is being asked of both emergency services and police response agencies, spanning the gambit of social need from homelessness and addiction, to emergency medical treatment and mental health crisis intervention. The urgency of these crisis situations often comes while indicating a hyper-vigilance of human tragedy. Unlike professional cultures where trauma is part of the everyday work such as in forensic pathology, crime scene cleanup, or other such work where proto-familial bonds are formed around the overwhelming tragedy and loss of life, ambulance paramedics encounter the wreckage of a tragedy unfolding, a tragedy that is constantly in motion and that may not yet have completed all possible outcomes.

Emergency ambulance calls, often referred to as “jobs” within the profession, exist within a near-infinite range or continuum of severity. From a patient suffering a headache, to an elderly woman in active cardiac arrest with a family screaming their grief outside the home, the call centre triages a continuous stream of requests for paramedic intervention, allocating resources, monitoring activity and ensuring the safety of crews and equipment in an environment of continuing stream of messages and knowledge about what is happening in the community. The ambulance telecommunication technician must create a treatment programme for the truancy problems of a grade-8 boy. A parent on the edge of suffocation after a son’s first opiate overdose. Attempting to make sense of a patient in asystole in the context of an empty apartment while a partner is in custody being arrested on behalf of a first-degree murder charge. Eighteen unique situations and narratives in contention with the heading of emergency medical aid displaying different levels of depth and magnitude.

The modelling of patient care in the initial stage of the profession is one of transition from the excitement of an existing physicality in the ambivalence of wonder. A well-organized and sober effort meets both an expectation of politeness and a kinetic panic of the need to act quickly. Foremost within a paramedic’s questionable preparations for entry into the profession is the mantra that while you may get yelled at, spat on, pained and beaten you will likely never again look away or walk away from a tragedy unfolding. More intimately, throughout the years, a learned vigilance towards small details, developments, gestures, innocuous movements of space and individuals, has been cultivated from simple, momentarily laughing breaths to deeper and deeper futures of flight connecting unacquainted lives to trauma too large to be contemplated yet felt vividly in every remnant of habit. The need for recognition of the soul and a demand for silence on subjective experience becomes acute as an ecosystem’s interconnectedness sways on the un-sense of something having gone terribly wrong (Goad, 2018).

4. Trauma in Paramedic Work

Numerous studies have demonstrated that a substantial percentage of first responders may develop psychological trauma when responding to critical incident events. However, it has been found that this population remains at significant risk of developing PTSD due to the nature of their work and the recurring critical incident events they respond to (Goad, 2018). In fact, estimates vary as to how much of the population may go on to develop PTSD, but a range of 9 to 22% would apply to most public sector first responders. The reality is that, unlike a person who, after a traumatic incident, is able to get on with their lives and return to work as usual, this population is employed in a field which will virtually guarantee that they will respond to another critical incident shortly after the last one. Longitudinal studies of PTSD and resilience suggest that rather than diminish over time, the previously discussed problems in the management of PTSD symptoms may actually worsen.

Significantly, much of the research effort in trauma treatment has been directed toward the treatment needs of combat and rape victims, while relatively little attention has been directed to treatment needs of first responder victims. As a result, the ambulance service attempts and assess for the first version of a unique traumatic impact audit. The tragic aspect related to the treatment of PTSD in care providers is the equally tragic phenomenon of increased risk of suicide. Following significant stressors or event, large numbers of first responder care providers and personnel commit suicide, and/or unhappily continue to work still traumatised afterward. Even after retirement from work that was previously a passion, unresolved critical incident memories interfere with the ability to re-engage in other life pursuits. Unfortunately, it is thought that the off-duty trauma exposure to

events in the nature of accessing trauma care for a spouse, family member, or friend takes a toll. Complete apathy occurs toward emergency needs of loved ones when the spectre of tragic events is revealed.
In October, approximately 27- to 28% of Canadian paramedics had considered ending their lives as a result of the many effects of their chosen profession. The numbers forcing politicians and union leaders to seek either greater resources and/or allowances for humouring these unique individuals should shock those both in the profession and those outside its protective circle. These unexpected revelations should be sounded as a clarion call for society to link arms and offer to patch the wounds of those who work tirelessly to save the lives of strangers innumerable times each year. Paramedics are ideal employees – self-sacrificial to a fault and consummately committed to the greater good. Paramedics care deeply about humans. They are all hardworking individuals dedicated to a job which seeks to right the myriad of mistakes made by so many in life's hurried race against time. Unfortunately, their occupation exposes some to an acute danger to their self-health and safety along with a chronic danger due to decade's long exposure to the magnitude of human tragedy witnessed.

4.1. Types of Trauma Experienced

Ambulance paramedics are routinely exposed to painful human tragedies including road accidents, drownings, fires, child births and many more. This daily exposure to trauma can cause secondary trauma as individuals become emotionally overwhelmed by the suffering of others (especially children) and feel helpless to alleviate human suffering. Further trauma is experienced through frequent exposure to human death (Miller, 2003). Attending the death of children is particularly traumatic. These images may linger and intrude on daily living. Paramedics may drive past schoolyards with no reflection but suddenly become overwhelmed and sob at the recollection of child accidents. Witnessing horrendous deaths with flesh and bone strewn about the road can provoke feelings of self-hatred and doubt (Wheater & Erasmus, 2017). While such accidents may initially be accepted as "the job", self-doubts intrude. Becoming aware of family members can intensify the pain. Additional trauma is experienced when too few paramedics personnel respond to "triple zero" calls. This can occur with a range of incidents such as a work-related incident, shootings or fires, where collateral deaths or injuries are caused by inadequate response to police or fire. Paramedics may be irritated at other emergency service workers, their agency or physicians. They may note anger at the police for delaying calls, or at the doctor on-call.

4.2. Impact of Trauma on Paramedics

All emergency service workers are trained to deal with the demands of the job. However, for many new recruits this is not enough. Compassion fatigue can affect anyone who finds themselves 'in the business of caring' and creates a 'broader range of psychosocial consequences, resulting in a decline in compassion satisfaction'. When a traumatic incident occurs, there is an emotional response. Paramedics working in the emergency services cannot be complacent or indifferent to human tragedy. Having witnessed suffering, emotional mismanagement could escalate into psychological problems. Different people process emotional experiences differently. For some, it involves an emotional processing process, leading to narrative emotions. Another type of processing could involve a 'non-narrative, nonverbal' cognitive-affective processing style focused on avoidance and emotion numbing. Studies conducted regarding pre/post-trauma responses have only singled out specific individual incidents (Miller, 2003). Therefore, further detailed and qualitative examinations are warranted to rendezvous the emotional reflections after the witnessing of human tragedy through different processing styles.
Thirty ambulance paramedics participated in semi-structured interviews and described their 'chilling' experiences in their careers. Paramedics in their first year had the freshest battery of experiences whereby no emotional management had been learnt through the job. New recruits are expected to arrive without previous trauma exposure and from nothing suddenly be exposed to continual trauma. A 'year zero' effect ensues whereby concern is about having to leave the profession after some months. Simultaneously, recruits must confront the possibility that they are not 'built' for the job, and this comes with increased emotional pain as they worry they will 'not measure up'. Paramedics in their first few months came home upset and worried that the rancid kind of pain witnessed would overcome themselves. Paramedics reported the Coldstream Guards incident in which a child dove through the viewing deck of a commercial train. The video footage was broadcasted nationwide. Reasons of panic were pondered as to how parents could allow this to happen, and notions of punishment for the guardian surged. At other times there was also reference to parenthood being a source of worry and unfathomable terror.

5. Empathy and Trauma Interconnection

Understanding how empathy increases perceptions for compassion fatigue within ambulance paramedics is an important initial step in understanding the area. Research into trauma, mental health, and particularly post-traumatic stress disorder has increased in recent years, and ambulance staff have been the focus of much work. (Williams et al., 2017) discussed how professionalism and the ability to empathise with patients interfaced with burnout and vicarious trauma. The research conducted so far has improved understanding of the underlying

problems but has not yet investigated how it affects ambulance paramedics working specifically in a metropolitan or urban context. (Nina & Paulina, 2022) focused on the relationship between empathy and cognitive trauma processing in association with vicarious trauma among professionals working with victims of violence. This exciting new method of processing vicarious trauma beyond the traditional measures opens new avenues for examination. Understanding how empathy and changes in outreach practices particularly post-traumatic stress disorder increase perceptions for compassion fatigue or vicarious trauma within ambulance paramedics is a component of the picture that is only just beginning to be explored. Echoed in the research to date, it is important to understand how empathy translates positively and negatively for ambulance paramedics dealing with traumatic scenes, as well as how contextual and systemic barriers might constrain paramedics' efforts to be empathetic and prevent potential secondary traumatic stress. The social and institutional implications of the findings for further research, practice, and policy mandates are predictors of chronic health impairment, including burnout, compassion fatigue, and stress reactions. Paramedics' prolonged exposure to work-place and operational stressors can negatively impact their emotional and physical health. The nature of the paramedic job exposes staff to human tragedy on a routine basis. Despite the high-stake and traumatic nature of paramedics' work, there is little understanding of how they process exposure to tragedy and how this factoring conduit of care changes over time. Further, this understanding has implications beyond staff health, among trauma-exposed workers, non-uniformed police, fire crews, social workers, and emergency room doctors. It is important to understand how trauma exposure transforms, expands, or co-opts a conduit of care meant to be for others and to situate knowledge within the complex nature of systemic and institutional arrangements that inform a profession.

5.1. How Trauma Affects Empathy

Despite its many acknowledged benefits, empathy is not always an unambiguous good, and can operate to justify unproductive behaviors, as well as weighing upon those that express it (Williams et al., 2017). In addition, it is a notoriously 'slippery' notion, with many definitions attaching to the term in the scholarly literature, reducing the possibility of cumulative research effort. This next section commences with an exploration of the labeled components of empathy across the disciplines of bioethics, psychology, neuroscience, psychotherapy, and the social sciences, followed by a consideration of empathy's 'dark side'. Empathy is also a refuge for those not wishing to see the 'whole picture', and therapists and those mentoring individuals (known as 'systems') dealing with 'loss' may employ avoidance techniques through operational techniques to discourage 're' -empathy. Empirical studies document a decline in the empathy of healthcare workers, including ambulance paramedics, as a consequence of the residual effects of deteriorating psychobiological health. The longitudinal process of burnout and moral injury is considered evidence of such deteriorating health, and a framework is proposed for further exploration of the ways in which this occurs for ambulance paramedics. Specifically sketching the 'honeymoon', 'outwardly focused circle', and 'inwardly focused circle' stages of burnout, factors prompting a retreat from engagement with another person's trauma, and moral injury are described in the context of semi-structured interviews conducted into this process with ambulance paramedics. Each stage's description draws on empirical studies, while general consideration is afforded to moral injury: broadly acknowledged to be "suffering caused by doing or failing to do something that violates one's moral or ethical code". The decline in empathy observed in the literature on burnout has been proposed as a defense mechanism against exposure to human suffering, an attempt at protecting oneself by becoming less empathic towards patients. Empathy was captured in a student-version of the Interpersonal Reactivity Index, with details of a smaller, anonymous subset of demographic characteristics submitted by paramedics off medication. Nurse participants indicating burnout were coded as EE or non-EE through the Maslach Burnout Inventory. Consistent with the literature, paramedics coded as high in EE lost some of the ability to empathize with patients. Importantly, burnout and increased psychological symptoms were associated with decreases in empathy, with the overall pattern consistent with interpretations of the decline in empathy in part reflecting efforts to cope with psychological distress.

5.2. Empathy as a Coping Mechanism

While listening to trauma narratives of others may promote understanding and connection, it can also lead to emotional distress, vicarious trauma, and a burnout cascade. Empathic distress comes from affecting the emotions of the distressing stimuli of others where felt emotion and the empathic stimuli gets fused (Leuteritz et al., 2023). As a consequence, the receiver of the emotional affect may have the same feelings as the empathic stimuli, not only suggestive emotions. Empathy may involve a diminished perspective-taking ability and an over-identification with the affective states of those in distress (Williams et al., 2017). Empathic distress is thought to be the most vulnerable state for burnout. When paramedics deal with trauma reports of others, pressed after full-day shifts as "Please respond to 86-year-old female, previously well, now sick.", they have to reframe their emotional perception to contain their personal suffering, when the doctor still curses "What do I pay you for?", when the closest ones still scream and need more time to break apart but paramedics have to

leave as soon as possible. Those reframing strategies may be more effective to cope with trauma reports than empathy, where training material others can not see are required.
Sympathizing with as those having eleven children, people interject their experience as “When I heard they died I feel badly.”, which ends up abrupt faulty sympathy as those having eleven children feel more lonely and doomed. On the other hand, as the one who left no choice and no blame, paramedics have to filter sympathizing with or answering as life is filled with sadness and all they can do is to keep going. Similarly corruption of empathic assessment should be avoided as fellow paramedics embossed “I was blamed for several dying, seeing soup cans being sent home out of roaming over accumulating weed bungs…” and fell absent. When dealing with these elaborate social events, on the contrary to direct sympathizing, a general understanding of sadness and an ignoring and abiding passivity could help.

6. Psychological Impacts on Paramedics

Ambulance paramedics respond to emergencies on the frontline and are repeatedly exposed to traumatic events that can induce stress reactions . Short term incongruency in the stress response system is adaptive and essential to ensuring paramedics are capable of dealing with human tragedy. Longer term maladaptive responses to repeated trauma exposure, however, can be psychologically dangerous for paramedics and severely impair their capacity for good patient care if untreated. Police, fire-fighters, trauma surgeons, combat veterans, and child protection officers all hold analogous responsibilities that subject them to similar stress factors, and these professions have a history of adverse psychological fallout due to repeated trauma exposure. Paramedics are no exception. There is growing recognition in Australia that the psychological well-being of ambulance paramedics is an important issue. In recognition of this, many ambulance organisations have begun improving their internal support networks and their links to external professional organisations that are paired to assist paramedics confronting maladaptive psychological responses.
The pre-existing culture of paramedicine revolves around the idea of problem-solving and "fixing" situations. However, this strong goal-orientation can render paramedics ill-equipped to deal with grieving families once the immediate situation has been stabilised. Following the completion of critical patient care, paramedics may often be confronted with the notion that there are family members left behind to deal with the aftermath of the tragedy just seen. In keeping with their own training, intelligence and experience, paramedics strive to offer an explanation. Yet, through attempts to provide understanding, the paramedic also re-experiences the vision seen in the call. Such self-awareness about their awareness of the trauma can be viciously debilitating without a desired outlet.
Seeking closure may be another option in order to decrease the paramedic’s level of arousal. This may involve excessive drinking, drug use, and reckless driving behaviour. However, avoidance of trauma only prolongs the adjustment to stressors. Individuals bottling up stress without any discussion run the risk of being irritable and argumentative towards either their family or co-workers. In the absence of this outlet, it has been known for paramedics to occasionally use humour excessively.

7. Strategies for Managing Trauma

The literature related to the management of trauma in paramedics is sparse. (Leuteritz et al., 2023) Cognitive approaches may also be considered effective strategies for many forms of trauma, especially if there is an emphasis on self-healing. Attention disorders, acute stress and dissociation may benefit from psycho-education, reframing of the incident and extensive descriptions of the automatic information processing that leads to distressing trauma symptoms. Restructuring of automatic thoughts and self statements may assist in quietening an aroused amygdale. However, addiction processes related to alcohol or recreational drugs may appear more difficult to discontinue and self-soothe. Programs for productive leisure or coaching in second hobbies may be drawn from.
Similar insights and advice can be drawn from the literature about trauma management for emergency service personnel. (Cochran & Albert Bardi, 2010) emphasize the importance of pre-incident training which assists in reducing distress. They stress the value of stress management training for emergency personnel and recommend the use of a variety of exercises or methods. Skills such as interpersonal sensitivity may help individuals to observe the emotional state of their coworkers and possible symptoms of distress, and to question their feelings respectfully. In addition, paramedics are at greater risk of developing alcohol-related problems than the general population. Further investigations of why this association exists and possible strategies for managing this risk may also be fruitful. In sum, understanding trauma may lead to self-management without reliance upon intervention from counselling psychologists.

8. Training and Education

Empathy in human beings has a distinct neurobiology. Its circuits appear to be ancient, co-opting aspects of disgust, producing aversion, and linking this with a visceral reaction. Simple play, whereby the neonate first learns about social interaction, proceeds to more complex forms, allowing for kinship and cooperation. Altruism

is now evident, where kinship continues, and cooperation is based on social contracts. Importantly, the medical professions appear to be an evolutionary extension of altruism. Yet Darwin did not discount competition and conflict in evolution, which is also intrinsic to human nature. Despite their viscerotropic basis, empathy systems are far from inherently moral. This dovetails with the necessity of moral frameworks and ethical standards in medicine.

The majority of ambulance workforce is basic emergency medical technicians and emergency medical technicians. The roles require a variety of knowledge and skills such as the ability to recognize medical signs and symptoms, provide basic first-aid procedures, and assess and manage the elements required to transport a patient. In addition to the above, education of ambulance officers could include the following: Health concepts and challenges within the community; The need to adopt equal opportunity principles within incoming staff; Conditions affecting working with the elderly; Deliberate self-harm and the needs of the person making threats; The needs of persons with special needs; Learning about, and navigating, the ambulance services work–life balance in the context of continually evolving technology and restructuring; An understanding of differences between ambulance roles and in addition, responsibilities on the road to reduce potential litigation.

Paramedic education has become increasingly advanced at the undergraduate and postgraduate level. The Australian College of Ambulance Professionals curriculum framework has developed an eight component framework. The education has led to a much wider syllabus, with less empathy in trauma and more consideration of grades of trauma. It is important and necessary that any initiation of education on trauma be undertaken by an individual or group currently employed in the role on the road, as they are the only educated personnel in the area of experience for paramedics undertaking the course . Trauma must be identified as early and close as possible after its occurrence, preferably within and by the group to be educated. Education detailing an individual paramedic's traumatic situations should be included (whilst still respecting confidentiality).

9. Organizational Support

Participants from a variety of professional backgrounds had the impression that paramedics who work in less systemic organizations learn to be less empathetic, while those who work in stronger, more supportive organizations evolve more in-line with personal qualities associated with empathy. To this end, one participant commented: I think people who come from stricter organizations come out with a totally different looking set of lenses and perspective and that lens is hard to shake. They are unable to empathize, be compassionate, and even acknowledge the human behind the tragedy. Some other commentators agreed: They become jaded. While the example of paramedics changing qualities associated with empathy was told in relation to outsiders (police, dispatchers, and administrators), it is reasonable to assume that there might be such a change amongst paramedics in such organizations as well. Others, however, commented that working in a systemic organization "normally doesn't affect your personal qualities. You are who you are", or that it may even reinforce the positive effects instead: If you're in a good organization, your good naturedness and your empathy flourishes (K. Gray, 2004).

Apart from influences on the individual's perception of the situation, systemically stronger organizations were perceived as doing more that ought to be done (in terms of supporting the people and the teams, and responding to stressors and incidents) or more genuinely in their endeavors to effectuate what they should be doing. Examples were given, for example, that paramedics in a stronger organization were perceived as being led to regard clinical-related stressors (e.g., a seriously injured or deceased child) as a part of the job, instead of a life-altering tragedy (Geuzinge et al., 2024). Overall, stronger or more supportive organizations were perceived as having a warmer, softer, or kinder, approach (unless, of course, it is tough love that motivates improvement) than less supportive or weaker ones.

10. Case Studies

Over the years, paramedics have been perceived as flesh and blood angels and are revered by society to be godsend who arrives at the hour of need. A clear dichotomy exists in this perception—between those who save lives and death. In Canada and around the world, paramedics are immigrants of the story in which they attend victims of human tragedy, but society knows very little about their story. There is no more human tragedy than which collided and claimed 15 innocent lives in seconds. It is a tragedy seared in every Canadian's memory. A class, a community, and a country were left grieving in its wake. Yet as heart wrenching stories of gathered flowers and pooled tears filled the airwaves in the days after, one note was curiously silent—the response of the paramedics who arrived first to assess, save, and transport. With only minutes to spare before the arrival of fifteen trucks, an auto-remote was frantically essayed, sending the world into motion, vicariously placing the author in the role of conductor.

The goal was to train the intel of the numerous systems to automatically launch the transportation of sick and injured victims of Cardiac Arrest, Trauma, and Stroke. It was a goal accomplished with machines programming their own tasks, yet it left a gnawing feeling as to its emotional side—would the paramedics react as planned? Would sitting in a room with the go button also be at once action and reaction? Though a wild retinue of good

intent was explored, it left feeling hollow around the human urge to sad, grieve, and lament that subsequent wounding is no recompense (Jennings, 2017). The goal of this practising narrative is to make this story, to mitral some arbitrary symptoms so it can be banished from internal crying and made public. Ultimately, the story falls into the hands of the heroes and mental health scientists who follow them around with pencils and undercut the human tragedy that is health care. Through their lens, individual actions became the metrics of intent. Many thousands of rides attempted to haul upon their upper lip with lids 'tight' and tensions 'better done advanced in familiar company'. Yet at the acquired base of a headlamp, it is hoped to clear time to the whole apparatus of carriages, drivers, and roads whereby is witnessed great ironies in light and shadow.

11. Future Directions

Despite torso empathic experiences following trauma, having work place trust, continuous supervisor support and peer-debriefing sessions helps attenuate the impact of vicarious trauma. Peer support groups for paramedics and their partners are set up to educate about normality of stress symptoms, lessen feelings of isolation, build support networks, inform staff regarding help options, lobby administration for healthier workplace, and train responders. Participants emphasized lessons learned from their work experiences. Participants gain a glimpse of their coworkers during humanitarian experiences, and paramedics are abundant in care and initiated intensively to updating training SEP and monitoring suffering patients' needs. Future research with a co-production paradigm is recommended to ascertain widespread tensions with extra survivor experience from explicit supervision, coupled with administrative support necessity. Continued collaborations between mental health representatives and paramedics are warranted to advance paramedic mental health workplace solutions. Co-creative research on inter-organization joint objectives diverging between dispatch and emergency service calls, pre-hospital environment adversaries, and impact on care is needed. Understanding work based distress accumulation as a tangled organization-system structure should be emphasized. Future studies are recommended to include observers of events, such as dispatches or coworkers, to explore the overall system's experience when managing difficult calls. The nurse-patient relationship is defined clinically as a caring relationship where trust is central and where the nurse is attentive to and responds to the needs of the patient. Paramedics need to manage their own stressors in their work in addition to the stressors of patients exposed to trauma, death or other losses. Paramedic presence as an emotion then has an inherent complexity of poor outcomes attached to it, namely difficulties in understanding, feeling and disregarding feelings as behaviorally framed (Jennings, 2017). Night shifts, unexpected weather conditions, having short arrival times, and driving haste police escort vehicles with slightly less equipment overall than station based ambulances are some obstacles to patient interaction.

12. CONCLUSION

This article has looked at some of the complex processes that ambulance paramedics navigate in the aftermath of human tragedy. With the nuance and depth of lived experience, interviews with paramedics have provided insights into the range of trauma and empathy, and the interplay between the two. Experiences of seeing patients change, adjusting trauma responses to those of their colleagues, the curse of the paramedic mindset, and the desire for shared funerals illustrate that empathy is not a singular experience, and in fact can be contagious and spread amongst a crew, more so than amongst the public. The role of supervision and peer support in navigating trauma and empathy, especially after exceptionally disastrous events, is explored. There is recognition that impacts can be too big to be left to the crew alone, that too much has to be dealt with, and there is a need for strong debriefing frameworks so that practical steps can be taken in intervention. In the next stage of the research, the aim is to consider these issues through the lens of trajectory, and offer a new approach for conceptualising trauma and empathy for ambulance paramedics. Now that a map of the process has been created, it remains to assess how paramedics navigate processes of empathy and trauma in the aftermath of human tragedy; to explore how interactions between space, time, bodily interplay and signs create a cartography processes; to elucidate this cartography through conceptual discussion; and to demonstrate how this cartography is graphically and narratively rendered.

With the information gaps exposed in the literature review and a target audience identified, the aim of the qualitative research is to discover how ambulance paramedics process trauma and empathy in the context of human tragedy using one-on-one interviews. As such, this stage of the research is primarily concerned with methods for gathering, analysing, interpreting and presenting qualitative data. Drawing on a wide range of social science methodologies, a project design that can uncover new knowledge, pursue the research objectives and ultimately realise the research aim is discussed. It is argued that one-on-one interviews provide the most appropriate means to gather objective, first-hand insights from ambulance paramedics, while thematic analysis is the most suitable method for analysing this data. For narrative presentation, interviews will be de-identified and presented as semi-fictitious, stand-alone stories composed entirely of the interviewee's words. Such a form has the potential to move beyond the limitations of traditional academic discourse, resonate with target audiences and engage them on an emotional level, and be readily adapted for multiple formats and uses.

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