

## **Paramedics do not Always Develop PTSD: Emerging Data on how Paramedics Prepare for and Process their Day to Day Critical Stressors Experienced on the Job**

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The purpose of this study is to reveal a new perspective on continuing mental health education for paramedics. Critical stress is an accumulation of stress over time that had a significant impact on the individual and can include stress caused by single or multiple critical incidents (Austin, Pathak, & Thompson, 2018). Stressful events are inherent in the roles of paramedics and have the potential to cause occupational stress injury which is a common term used to describe mental injury caused by stressful events, or “critical stress” resulting from one’s occupation, that could lead to a diagnosable mental disease or disorder. These critical incidents are major crises that may or may not be dramatic but can have had significant impact on the individual (Austin et al., 2018; Hayes, 2018; Hughes, 2007; Pietrantonio & Prati, 2008). I am interested in exploring how the use of reflective practice—the use of critical reflection on events arising from practice with the goal to learn from the situations and to be able to apply the new learning to future situations (Pretorius & Ford, 2016)—to cognitively process critical stressors can improve resilience to occupational stress injury in paramedics. Such resilience is predominantly viewed as a recovery strategy to aid a person’s ability to adapt to or bounce back in the face of acute or ongoing stressors (Pietrantonio & Prati, 2008; Streb et al., 2014) and can be considered a preventative or protective strategy (Carter, Boden, & Peno, 2019).

This paper describes the emerging data from a larger case study of six paramedics, three males and three females, ranging in 11-33 years of experience, who have experienced growth where many others experienced distress.

### **Research Problem**

There are recent studies on self-care approaches as a resilience strategy (Bettney, 2017; Mills, Wand, & Fraser, 2018) for improving EMS culture and for enhancing resilience as an adaptive and recovery strategy (Pietrantonio & Prati, 2008; Streb, Haller, & Michael, 2014), but there are very few studies that focus on teaching resilience (Austin et al., 2018; Clompus & Albarran, 2015). Until recently, there were no studies that focus on building resilience as a resistance strategy that can be used in preparation for adversity from a preventative and proactive point of view (Carter, Boden, & Peno, 2019), and none employed the lens of adult education. As a stress resiliency strategy, the literature raises the question of whether an individual can learn how to prepare for potential critical stressors they may experience. Constructivist learning theory literature (Cranton, 2016; Kreber, 2012; Merriam & Bierema, 2014; Taylor & Cranton, 2013) suggests that it is the influence of the individuals' beliefs that create the reality they respond to. Facilitating or guiding an individual to become a self-directed, critically reflective, learner; or to become more open to transformational learning, where perspectives can change, may serve as a self-directed resilience strategy. This study will examine the use of critical reflection and the possibility that it can improve resilience to occupational stress injury in paramedics which subsequently can lead to growth as opposed to distress. Critical Reflection, in this context, is described as the challenging of ideas that are taken for granted; examining underlying assumptions of ideas, actions, perceptions or meanings; attending to

life's complexities; and pondering alternative ways of thinking (Brookfield, 1987; English, 2012; Kreber, 2012).

### **Context for the Study**

There exists abundant research on the detrimental effects of critical incidents impacting Emergency Medical Service (EMS) professionals suggesting a high incidence of occupational stress injury (Austin et al., 2018; Pietrantonio & Prati, 2008; Public Services Health and Safety Association, 2018; Streb, Haller, & Michael, 2014; Tema Center Memorial Trust, 2016). The research shows that there is a substantial number of paramedics who struggle with occupational stress, but there are many more who do not, and who may even experience growth as a result. This notion raises the question: What are the paramedics who do not struggle doing differently? This study differs from most as it looks at paramedics who self-identify as having grown from their paramedic experiences. Its focus is on resilience as a resistance factor—a strategy used in preparation for adversity from a preventative and proactive point of view (see Carter, Boden, & Peno, 2019).

### **Positionality of the Researcher**

I have over 30 years of experience in the field of paramedicine and related industries and have personally overcome the effects of occupational stress injury. Through a long paramedic career, I have learned through experience how to turn rumination into reflection. This reflection affected my identity, changed my beliefs and behaviours, and changed the lens through which I view the world. This positionality categorises me as an insider of the paramedic community. As an insider it is impossible to remain neutral and the potential to introduce bias needs to be acknowledged (Dwyer & Buckle, 2009). My personal story forms part of the conversations and resulting data, not only to provide a

continual awareness of my biases, but also to serve as a comparison to the data as my story adds a valuable perspective to the multiple perceptions of the participants.

### **Methodology and Methods**

Case study methodology can be employed when investigating phenomena occurring within a bounded system such as the practice of paramedicine. I used an instrumental case study methodology (Carolan, Forbat, & Smith, 2016) to analyse the impact of critical stressors resulting from professional practice that many paramedics experience. An underlying constructivist philosophical approach guided the methodology in understanding how paramedics make sense of their experiences, interpret their day-to-day stressors, apply meaning to those experiences, and construct their realities (Merriam & Tisdell, 2016). It is through the analysis of each paramedic's narrative, articulated through semi-structured interviews, that the meanings of experiences are revealed (Merriam & Tisdell, 2016). By revealing meanings of experiences, a better understanding of the wider issue of ways some paramedics cognitively process their critical stressors can be built.

### **Presentation and Discussion of Data and Emerging Findings**

“Tell me who you are and why you became a paramedic.” This was the first interview question posed to all participants of the study. What surprised me the most was that only one participant actively planned and worked toward a paramedic career. The other five participants became paramedics through happenstance; their choices were made based on the relatively short training program, views that paramedicine seemed a potentially exciting career, and one participant simply flipped a coin to choose between a policing or paramedic career. Although many people would believe that the story of resilience to critical stressors begins concurrently with the

start of the paramedic career—whether it is a chosen career or a career that one fell in to—the foundation of those stories begins much earlier. In this excerpt of a larger case study, I explore participants’ stories with the aim of identifying ways in which they used reflective practice to become resilient.

*Evidence of reflection.* The common thread between the participants in the study (pseudonyms used throughout) is that paramedicine introduced them to a world they did not know existed. For example, Katherine experienced internal conflict between what she perceived to be “normal” based on her conservative middle-class upbringing and her perception of other social classes. The poverty and violence she saw in her new paramedic-career experiences resulted in her need to critically reflect in order to better understand her internal conflict. Robert’s upbringing was similar to Katherine’s, but the events that caused him to critically reflect were the violence and self-harm he witnessed. Johnathan came to the paramedic career a little later in life than Katherine and Robert. Johnathan was more aware of different social classes in society and did not experience the same impact as Katherine and Robert, but the exposure to the helplessness of those who are more disadvantaged caused him to critically reflect.

Critical reflection is cognitively demanding. It challenges an individual’s core beliefs and assumptions and has the potential for emotional upheaval (Brookfield, 1987; Cranton, 2016; Hollins, Luna & Lopez, 2014; Mezirow, 2012; Pretorius & Ford, 2016; Taylor & Cranton, 2013). All people have a set of core beliefs. We have ideas that are taken for granted. Core beliefs are underlying assumptions of ideas, perceptions, or meanings we have built throughout our lives. For a paramedic who sees life and death unfold daily, especially for those like me, Katherine, Johnathan, and Robert, to whom such experiences do not match their core beliefs,

this causes a “disorienting dilemma” (Mezirow, 2012). The disorienting dilemma is perplexing and if nothing is done to cognitively address the differences between the new reality being presented and the realities we have built for ourselves, the result can be distress. Yet, to do something, to critically reflect, causes potential for emotional upheaval. Although this situation may seem to be a choice between two evils, the benefits resulting from critical reflection outweigh the risks as opportunities for transformation may be presented along with opportunities to build resilience (Tisdell, 2019). Through this conundrum, the participants all indicated that they cognitively processed their experiences in some manner. Some used stress management and coping strategies that aided in this process such as lifestyle, mindfulness, and meditation, but most relied on dialogue as a means of fostering critical reflection.

Charaniya (2012) explains that we create our realities. Our personal narratives and knowledge are socially and collaboratively constructed through dialogue which can prompt critical reflection. Dialogue fostered by an event creates an avenue for assumptions to be articulated and perspectives tested against those of others or modified accordingly (Brookfield, 1987, 2012; Cranton, 2016). The events the paramedics described can cause distress and create dilemmas. Ward, Boden, and Castleberry (2019) advised that dialogue can assist in the creation of new meanings when focusing inward attention but requiring outward action when processing events. The participating paramedics experienced dilemmas throughout their work and engaged in the type of dialogue where meanings can be ascribed to the events they were experiencing. The best example comes from Julie’s story:

Talking helps because it gets it from inside your head. It gets it from inside to the outside and it somehow loses its power when you speak it out

loud. If you are harboring any untruths, when you say something out loud and it is not true, it seems ridiculous, but inside, in your head, when you are trying to process things, sometimes it just stays stuck.

Julie's "outward action" was to externalize her thoughts, to say them out loud to a person through dialogue to make sense internally though hearing her own words. The stories paramedics tell, or the situations of patients that paramedics may witness, can also foster critical reflection. Johnathan explains, "You cannot help but reflect on the things that you see. They may not cause me stress, but they certainly cause me thought."

Reflecting on stories to understand why a disorienting dilemma occurred contributes directly to the type of systematic reflection suggested by Merriam and Bierema (2014). The reflection can facilitate the ability to make new meanings of experience and foster the capacity for transformational learning. Julie described the process of making sense and understanding as a puzzle that needs to be solved: "I need to put all the pieces of the puzzle together at the end of it." Katherine systemises the process to aid understanding: "I feel like putting it on your ACR [Ambulance Call Report] allows you to put things in chronological order ... [a way] of getting all the facts to be part of that whole understanding thing." Solving a puzzle using a systematic approach builds a narrative that can be critically reflected on to process the experience and create meaning. Through critical reflection on experiences, assumptions can be analysed and compared with the perspectives of others (Brookfield, 1987), new realities can be created to match the new experiences (Charaniya, 2012), and beliefs and perspectives can be transformed (Brookfield, 2012, Mezirow, 2012). The participating paramedics told stories of numerous events that challenged their understanding of the world. The paramedics viewed these

challenging events like puzzles that needed to be solved to reconcile them with how they previously saw the world. The narratives we articulate and the stories we tell, help us piece together the puzzles assisting with making sense of our experiences. Some participants used a systematic approach, some used experience and logical thinking, while others encountered barriers.

*Barriers to reflection.* When encountering critical incidents, and viewing them through personal lenses, connections are sometimes made to personal lives that can change the focus of the individual's lenses. The participants called these connections "triggers." Specific triggers changed and evolved for the participants resulting from their life experience. Most were related to family thorough the development of strong bonds to family, parenthood, and children. People often develop ideologies of how life should be, and personal connections can block their ability to critically reflect on these ideologies (Merriam & Bierma, 2016). Although the personal connection and resulting bias can be strong, they can be transformed to new ways of knowing by encouraging critical reflection (Coady, 2013; Fazio-Griffith & Ballard, 2016; Heddy, Sinatra, Seli, Taasoobshirazi, & Mukhopadhyay, 2017). However, the stronger the personal connection is to the experience, the greater the associated discomfort resulting from the critical reflection; it thus becomes a greater barrier (Brookfield, 1987; Cranton, 2016; Taylor & Cranton, 2013). Terry, for example, found emergency calls involving children to be a trigger. The trigger became stronger with fatherhood: "I find now [that] I have a family, some calls [are] more relatable so if it is a call involving a child that is the same age as my child, you automatically think . . . what if that was my kid?"

*Overcoming barriers.* When triggers and barriers are encountered, it becomes more difficult to assimilate or accommodate the event. The participants described difficulties due



to their own compassion and anger, and some report a new awareness resulting in a concern for their own children. But when the events are overwhelming or hit too close to home, the participants explained that they would reach out for assistance in processing the event. Sometimes perceived cultural beliefs need to be broken down for dialogue to happen as in Julie's experience early in her career:

After the SIDS [Sudden Infant Death Syndrome] death I had a good cry. I can remember coming out to the crew area. My eyes were probably still a little puffy. I thought I was being tough [and came out] to find the senior medic there, crying.

That gave me permission to be human.

Ward et al. (2019) explained that critical reflection is more difficult when in the midst of a crisis. Julie's barrier was her perception that she must be strong and hide her emotions which ultimately would block the ability to critically reflect, but seeing a peer's reaction broke that barrier. Although critical reflection implies a focus on thoughts and cognition (Mezirow, 2012), in critical thinking, critical reflection, and for their part in transformational learning, emotions play a large role (Charaniya, 2012; Illeris, 2013). Strong emotions can signal the importance of, and need for, critical reflection. To learn from and to make meaning of an event there must be reflective discourse through dialogue with others. The action of critical reflection helped the participants of the study analyse their assumptions behind their feelings and resulting behaviours as described by Ward et al.. The participants learned through experience that when the severity of the critical stressor increased, or if the critical stressor was a trigger event, the need for assistance in processing the event also increased. As described by Katherine, participants would reach out to engage in dialogue: "If it is a little more severe and I am struggling a little bit more, it might [pause] it

might be a talk.” Lorna added: “[if] the call is too close to home, and I will not be able to talk about it because it is affecting me too much ... I try and keep it all in and go home and pretend that nothing is wrong ... that is when the anxiety comes, the thoughts come. It does not help if you do not talk about it.” Their dialogue would alleviate anxiety and could also lead to change.

*Evidence of change.* Transformational learning is the result of learning through reflection on the unique psychic structures of the individual or, in Jungian terms, the emergence of Self (Cranton, 2016). Transformational learning is not likely to occur without critical reflection (Brookfield, 2012; Cranton, 2016; Merriam & Bierema, 2014, Mezirow, 2012). It is solely in the mind of the individual and can only be seen by others through changes in behaviour and in the stories they tell. The stories told by the participating paramedics included a new and ever-evolving normal due to the regular disorienting dilemmas they experience as a paramedic, and a change of how they see and fit in the world. The participants described how they became emotionally detached but at the same time more empathetic. A common theme amongst the participants is a hardening of emotions resulting in a fine line between newly acquired positive and negative traits. The participants were able to identify a change in themselves and their perceptions of the world. All but one participant indicated that their emotions had been hardened while their empathy had increased. Hardening should not be confused with compassion fatigue—negative feelings about helping others and a lack of meaning in one’s efforts (Pietrantonio & Prati, 2008)—as all participants indicated a sense of compassion satisfaction. This compassion satisfaction is similar to posttraumatic growth (PTG)—a positive change in an individual as a result of traumatic experiences, including changes to how the person relates to others, new possibilities, personal strength, spiritual change, and new

appreciation for life (Austin, Pathak & Thompson, 2018)—and includes positive feelings and finding meaning resulting from critical stress (Pietrantonio & Prati, 2008).

## **Conclusion**

Paramedics see life and death unfold daily resulting in multiple disorienting dilemmas. For most, the dilemmas present new realities that are not congruent with past experiences. These dilemmas can be bewildering for some as the situations require a change in belief paradigms, or distress may ensue. Adding to the perplexity for change to occur, critical self-reflection and critical reflection are required to create the potential for emotional upheaval. But in this turmoil, there are opportunities for transformation. It is through critical thinking, critical reflection, and critical self-reflection that paramedics can process or make sense of their new experiences. The participants indicated that they used critical thinking, experienced positive feelings, and found meaning resulting from their experiences and critical stressors. The participants also held a new appreciation for life as a result, evidence of posttraumatic growth, and a change in how they see their worlds. Further study is required to identify if there are characteristics of a paramedic candidate that would assist or hinder resiliency: If age, maturity, and life experience are important factors, and how external stressors and mental wellness might interfere with paramedic resiliency.

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