# Anchored in the Shifting Tides: An Interpretive Phenomenological Study of Paramedic Resilience and Worldviews

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**Abstract**

The purpose of this hermeneutic phenomenological study is to explore the experiences of paramedics in Western society, who self-report sustaining positive psychological well-being despite their emotionally and psychologically demanding work, examining particularly the interplay of their narrative identity, spirituality, worldviews, and social connections. The stories paramedics construct about their realities can reveal the underlying meanings and how their role has molded who they are, best viewed through a threefold constructivist theoretical framework: narrative identity theory (McAdams & McLean, 2013), to understand how paramedics make sense of their experiences, transformational learning theory (Mezirow, 1991, 2012), to identify how paramedics adjust their worldviews to withstand the rigors of their work, and posttraumatic growth theory (Tedeschi & Calhoun, 1996, 2014), to illuminate how paramedics might grow from their experiences. Accordingly, the research questions are designed to elicit prereflective stories of paramedic experience: How do paramedics describe their narrative identity and what it means to be a paramedic? How do paramedics describe the distressing experiences they face, and the ways they navigate challenges in their work? How do paramedics describe the ways in which connection, spirituality, values, and moral frameworks shape their lived experiences? How do paramedics describe experiences of transformation and growth? Data collection will include semi-structured interviews designed to enter the other person's perspective and invite participants into deep, narrative accounts of specific experiences as lived, rather than abstract explanations or evaluative summaries. Data analysis will follow a structured process of phenomenological reduction using horizontalization, thematic analysis, and imaginative variation, using 'epoché' bracketing to minimize bias, resulting in thick, rich descriptions.

*Keywords*: paramedic, stress, trauma, resilience, narrative identity, spirituality, worldview

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## List of Abbreviations

Moral Injury (MI)

Posttramatic Stress Disorder (PTSD)

Posttraumatic Growth (PTG)

Potentially Morally Injurious Events (PMIE)

Public Safety Personnel (PSP)

Road to Mental Readiness (R2MR)

# Chapter One: Introduction

## Overview

This chapter begins by reviewing how the profession of paramedicine evolved, how the perspective of stress and trauma changed over time, and how paramedic identity and transformation can influence resilience to stress. Resilience is more than the absence of distress or bouncing back from adversity; thus, this study focuses on lived experience and how paramedics grow in the face of adversity. As I am a paramedic, the situation to researcher is described in detail to reveal potential bias and the lens used to inspect and interpret the data. The research problem and purpose are explained and are summed up with the significance of the study. The chapter closes with the overarching central research question and sub-questions, and definitions of terms used in the study.

## Background

Paramedicine is a young healthcare profession, evolving from stretcher carriers to a regulated and highly skilled clinical role. Understanding the historical development of the profession can reveal the complexities of the stressors that are endured and provide the context for exploring how paramedics construct meaning, navigate adversity, and remain resilient.

### Historical Context

In the context of healthcare professions, paramedicine is relatively young. Prior to 1960, ambulance response was provided by a patchwork of providers, many of which evolved from the tradition of wartime stretcher bearers. They were sparsely located throughout Western regions and countries that offered very basic first aid and transportation, laying a foundation for a new profession (Makrides et al., 2022). The 1960s and 1970s saw the formation of regulations, regulatory bodies, and the introduction of formal education, with the first technician programs

starting in the latter part of this period (Hill & Eaton, 2023; Makrides et al., 2022). Over the following two decades, the role shifted rapidly from a technical role to a clinician role with advanced paramedic skills and increasing educational requirements. Some jurisdictions introduced multi-year college programs, while others developed formal university degree pathways. By the 2000s, regulatory colleges were established in some provinces and countries, accompanied by the development of specialist and community paramedic practitioner roles. Each step increased clinical expertise, complex decision-making, and systemic accountability (Makrides et al., 2022). These advances heightened the potential for occupational stress in addition to the trauma-related stressor perceived by the paramedics inherent in their work.

Although reactions to trauma were recognized long before 1980, described as shell-shock (or shock), combat fatigue, exhaustion, and many other terms (Loewenthal et al., 2022), PTSD was not recognized as a mental disorder until 1980 (American Psychiatric Association, 1980). At that time, the prevailing perception was that those most likely to suffer PTSD were individuals exposed to war, large-scale violence, or catastrophic disasters (American Psychiatric Association, 1980; Wilson, 1995). For first responders who were suffering mental health issues due to their work, this created a self-imposed stigma for fear of being viewed as weak or discriminated against, as their experiences are not as extreme, thus creating barriers not only to seeking support but also advancing research (MacLean, 2024; Smith et al., 2021). As stigma gradually decreased, research into first responder mental health expanded, although most studies focused on the impact of critical incidents and the pathways to recovery for those who develop stress-related mental conditions. What remains underexplored is the other side of the experience, how paramedics adapt, thrive, or even grow through their work, and make sense of what they experience, and how this shapes their personal development and identity.

**Social Context**

Paramedic identity is shaped through lived experience and deeply influenced by the culture in which they are immersed. In the early years of the professionalization of the paramedic role, a 'trauma junkie' phenomenon was observed, where paramedics sought out the most complex and chaotic calls, situations that demand rapid command decisions, and showcased lifesaving skills (Palmer, 1983). Routine calls were considered 'uninteresting' (Tangherlini, 2000), were often regarded as trivial or burdensome, and sometimes led to inconsistent or substandard care (Palmer, 1983). Subsequently, what went largely unrecognized was how this hero mindset contributed to compassion fatigue and negative stress reactions (Renkiewicz & Hubble, 2023). However, as the profession matured, so did the culture.

The transformation from technician to clinician reframed the paramedic identity from hero to caregiver. This shift transformed the culture while bringing a deeper sense of meaning and relational connection to the role (Hill & Eaton, 2023; O'Meara, 2009). However, it also introduced new forms of stress (Hill & Eaton, 2023). Paramedics now navigate a dual paradigm that includes a new set of experiences with the potential to foster growth or cause stress or trauma (Rauvola et al., 2019). Within this tension, social structures, such as peer and family support, act as a buffer (Shakespeare & Savill, 2013). However, when critical incidents collide with the exhaustion of the routine, the emotional toll of the continual highs and lows, and the weight of the sustained empathy, within the milieu of paramedic work, perceived stress levels are exacerbated. This 'empathy-based stress' can lead to moral injury, an injury to the soul (Knobloch et al., 2021), and can be viewed as a potential connector between secondary trauma, burnout, and compassion fatigue (Griffin et al., 2023). Even with these role-based challenges, only a minority experience lasting negative outcomes. Many paramedics, in contrast, report

growth as a result, including stronger relationships and an enhanced appreciation of life (Shakespeare & Savill, 2013; Surgenor et al., 2020). Exploring the stories of those who thrive and grow despite these pressures is culturally and socially important, as the narratives may offer practical insights into how resilience may be fostered and how organizational cultures shifted to support wellness in the workforce.

**Theoretical Context**

Paramedics construct their identities through their stories of lived experience. Their stories can reveal how their experiences are integrated into a sense of self (McAdams & McLean, 2013). From trauma junkie to hero or to empathetic caregiver, how paramedics perceive their place in the world and their worldview can influence their mental well-being. Each of these identities can lead to distress or growth, depending on whether their experiences can be reconciled or incorporated into their stories. Interpreting their pre-reflective experiences as a way to explore their meaning-making processes may reveal how they grow and remain resilient (van Manen, 2014). The paramedic role is complex, navigating both routine and high-stakes situations while using empathy as a guide. The resulting chaos can generate 'disorienting dilemmas', prompting transformational learning processes (Mezirow, 1991). Such learning adds to or changes perspectives and belief paradigms, fostering growth that is beyond resilience. It is a positive psychological change that grows out of adversity (Tedeschi & Calhoun, 2004). This stands in contrast to distress, where adaptation or growth does not occur. This three-part lens focuses on the narratives of those who grow, built on a foundation of resilience grounded in lived experience. Research in this area can provide a new perspective on what it means to be resilient while contributing to the safety of not just paramedics but all first responders.

## Situation to Self

My motivation to complete this study comes from a long and storied career in paramedicine. I have shared many of the same experiences as the participants, witnessed the effects of those experiences on colleagues, and listened to popular opinions about what leads to different psychological outcomes arising from being a paramedic. Yet I have often wondered why those popular opinions rarely matched my own experiences or what I have observed in others. I have been a paramedic since 1986 and have served in many roles, from direct delivery of patient care to teaching and managing paramedics. I have been involved in paramedic wellness since 2005, creating and teaching courses about paramedic stress and resilience, creating and implementing a PTSD prevention plan for a mid-sized paramedic service, and studying and publishing on the topic, yet many of my questions still remain unanswered.

As a paramedic, this study is influenced by my personal experiences and how I successfully navigated my own career while maintaining positive mental health. Admittedly, the first several years of my career were not successfully navigated, but not due directly to the role. The stressors I felt were organizationally based, compounded by external stressors. The paramedic experiences that would be considered potentially trauma-causing exacerbated the resulting stress reactions, aligning with a common finding in the literature where the potential negative psychological effects of actual emergency work are rarely mentioned (Betts, Stoneley, Anderson, et al., 2024). What helped me navigate the waters of the paramedic role was the personal transformation that came from becoming a follower of Yeshua and embracing a new worldview (*English Standard Version Bible*, 2001/2021, 2 Corinthians 4:16; Ephesians 4:23; Colossians 3:10), that reframed struggles not as self-centered pain, but as opportunities for growth and for becoming more Christ-like (*English Standard Version Bible*, 2001/2021, Romans

5:3-4). This transformation changed my perspective on paramedic stress, suggesting the individual's worldview, combined with a spiritual belief system, plays a large role in being resilient.

This perspective aligns with my threefold constructivist theoretical framework of this study: narrative identity (McAdams & McLean, 2013; McAdams & Pals, 2006), transformational learning theory (Mezirow, 1991, 2012), and posttraumatic growth (Lindstrom et al., 2013; Tedeschi et al., 2017; Tedeschi et al., 2018; Tedeschi & Calhoun, 1996, 2014). Although a constructivist research paradigm is used in this study, it is not constructivism in the traditional sense, where there is a potential for multiple realities (McAdams & Pals, 2006), but where there is one objective reality with multiple perspectives, aligning with Mezirow (1991) and an underlying post-positivist philosophical assumption.

From an ontological perspective, post-positivism acknowledges that although a single reality exists, our ability to fully understand it is limited (Young & Ryan, 2020). As a methodological approach, post-positivism, rather than proving theories, often refutes them in the pursuit of knowledge. In this study, popular opinion is being challenged to truly understand the paramedic experience. Using an epistemological approach, paramedic experiences will be explored to discover their belief paradigms and perspectives of their reality to uncover how their anchor holds fast in the ebbs and tides of their work.

From an axiological perspective, I already have a set of belief paradigms and perspectives, where the promise of salvation is, "a sure and steadfast anchor of the soul" (*English Standard Version Bible*, 2001/2021, Hebrews, 6:19). As a result, I am not a neutral observer, but a co-constructor of meaning (Creswell & Poth, 2018). This insider perspective can enhance depth of understanding, but also carries the risk of bias (Dwyer & Buckle, 2009). To reduce

potential bias, it must be identified and monitored (Merriam & Tisdell, 2016). I will be using bracketing, reflective journaling, and mindfulness-based reflection to become more aware of preconceptions and remain as faithful as possible to the underlying meanings interpreted from the paramedic narratives (van Manen, 2017). My assumptions and preunderstandings will be continuously questioned, and making them explicit is part of the phenomenological reflection.

## Problem Statement

There is a clear gap in the literature regarding how preventative resilience functions within the lived experience of paramedics. A review of the literature on paramedic stress and trauma-related mental illness reveals a strong focus on resilience. Most studies will define resilience as the ability to bounce back in the face of adversity or recovery following exposure to potentially traumatic events (American Heart Association, 2017; Anderson et al., 2017; Anderson & Carleton, 2022; Austin et al., 2018; Denckla et al., 2020; Giostra et al., 2025; Hayes, 2018; Scoles, 2020; Vaughan et al., 2020). However, an often-overlooked definition of resilience is the ability to 'withstand', a strength-based factor (American Heart Association, 2017; Oxford Languages, n.d.), and can be viewed as a preventative approach. While this concept is occasionally discussed (see Carter et al., 2019; Denckla et al., 2020; Krupnik, 2019), it is only in passing and remains underexplored. Furthermore, very little of this research specifically focuses on paramedics. A paramedic's narrative identity or worldview may play a powerful role in the ability to withstand, fostering preventative resilience or even growth.

The use of coping strategies is a popular research topic (Miller & Brown, 2021; Rojas et al., 2022; Warren-James et al., 2022), and some studies include spirituality as a coping strategy (Akhtar & Naureen, 2024; Flint & Ronel, 2024). Resiliency training programs often emphasize teaching coping strategies (Lentz et al., 2022; Scuri et al., 2019; Vaughan et al., 2020), typically

focusing on recovery following potential trauma-causing events. However, resilience is more complex than the reactive framing found in the predominant literature. Resilience is not a static trait but a dynamic multifaceted interplay of ever-changing factors (Denckla et al., 2020). Resilience is fluid and is shaped by internal and external factors.

Some broader research involving first responders and other healthcare workers link resilience with personality traits (Alonso-Tapia et al., 2019; Froutan et al., 2018), worldviews (Bruun et al., 2024; Lewis Hall & Hill, 2019), and spirituality (Große et al., 2022; Kubitza et al., 2022). While these individual factors are crucial, they are often viewed through the lens of bouncing back from adverse events rather than from a preventative perspective. Even less attention has been paid to the role of community and social support as preventative factors that can be used to strengthen individuals, rather than turning to a peer as a reactive strategy.

Furthermore, there is a common perception amongst many that, due to the nature of paramedic work, not only is there a high risk of suffering trauma-related mental illness (Anderson & Carleton, 2022; Mausz et al., 2021), but there is also a high probability (Anderson & Carleton, 2022; Thomas, 2023). However, there is a wide disparity in the incidence of occupational stress-related mental struggles or illness in paramedics, ranging from approximately 11-14% reporting posttraumatic stress disorder (Alshahrani et al., 2022; Petrie et al., 2018), to 27% with general psychological distress (Petrie et al., 2018), up to 49% screening positive for one or more mental disorders (Thomas, 2023; Vaughan et al., 2020), with some studies estimating up to 60% (Wagner et al., 2020). Despite these inconsistencies, it is clear that the incidence of psychological unwellness is much higher than in the general population (Alden et al., 2021; Carleton, Afifi, et al., 2018; Wagner et al., 2020). Although most paramedics are exposed to potentially trauma-causing experiences on a regular basis, those who suffer ill effects

still only make up the minority, with an average of approximately 20% of the working paramedic population (Wagner et al., 2020). It can then be concluded that the majority, 80%, do not. What is not clear is what differentiates those paramedics who do not experience adverse psychological effects from those who do, despite repeated exposure to the same potentially trauma-causing events. Research that examines preventative resilience in the context of paramedics who thrive and grow could add a valuable and underrepresented perspective on the nature of resilience in first responders.

## Purpose Statement

The purpose of this hermeneutic phenomenological study is to explore the experiences of paramedics in Western society, who self-report sustaining positive psychological well-being despite their emotionally and psychologically demanding work, examining particularly the interplay of their narrative identity, spirituality, worldviews, and the influence of their social connections and support systems. The central research question is: What are the experiences of paramedics who have maintained positive psychological well-being despite the emotional and psychological demands of their work—how do they remain anchored as they navigate the shifting tides? Paramedic psychological or mental well-being is defined as not having experienced any negative effects (for example, time away from work, or therapy was required, to recover from situations related to their role as a paramedic), only experienced short-term temporary negative effects (for example, their distress resolved quickly through use of coping strategies that may have included peer, social, or spiritual support), or may have even experienced personal growth as a result of their role as a paramedic. The theoretical framework used in this study is threefold: narrative identity theory, which holds that identity is built through the meaning-making of life experiences (McAdams & McLean, 2013; McAdams & Pals, 2006);

transformational theory, which posits individuals learn and change through 'disorienting dilemmas' Mezirow (1991, 2012); and posttraumatic growth theory, which explains that growth can emerge from trauma and adversity (Lindstrom et al., 2013; Tedeschi et al., 2017; Tedeschi et al., 2018; Tedeschi & Calhoun, 1996, 2014). This three-part lens may reveal how paramedics make sense of their experiences and thrive.

## Significance of the Study

The literature is silent on how paramedic narrative identities contribute to resilience, transformation, and growth. Most of the literature related to paramedics and resilience is based on the few who experience negative outcomes due to critical incidents (see Carleton et al., 2019; Donnelly et al., 2016; Duschek et al., 2020; Mausz et al., 2022b; Thomas, 2023), or burnout and compassion fatigue (see Betts, Stoneley, & Picker, 2024; Puticiu et al., 2024; Rauvola et al., 2019; Renkiewicz & Hubble, 2023). This study shifts the focus from deficits to strengths. Instead of focusing on the minority of paramedics who suffer distress as seen in much of the literature (see American Heart Association, 2017; Anderson et al., 2017; Anderson & Carleton, 2022; Austin et al., 2018; Giostra et al., 2025; Hayes, 2018; Scoles, 2020; Vaughan et al., 2020), it focuses on those who do not.

This study is significant because there is little evidence describing the experience of the paramedics who not only survive but also possibly thrive and grow. Understanding their experiences could shape hiring practices, guide training, and support more effective mental wellness strategies. The knowledge gained can be translated and transferred to all paramedics in an effort to mitigate the negative outcomes experienced by the few. As paramedics are in the same public safety personnel category as police, firefighters, corrections officers, emergency dispatchers, and border patrol officers (Anderson & Carleton, 2022; Lentz et al., 2021;

Ricciardelli et al., 2020; Smith-MacDonald et al., 2021), the findings are transferable into these other contexts.

## Research Questions

The central question, derived from the problem and purpose of this study, is: What are the experiences of paramedics who have maintained positive psychological well-being despite the emotional and psychological demands of their work—how do they remain anchored as they navigate the shifting tides? The following research sub-questions focus on the different parts of the tackle needed for an anchor to hold fast that may be revealed in their pre-reflective narrative stories. The questions are designed to elicit rich, first-person descriptions of experience, rather than causal explanations or generalizations (van Manen, 1997, 2014, 2017). The focus remains on the meaning structures of experience as they are lived and expressed by paramedics who report enduring high-stress occupational conditions without identifying as suffering from posttraumatic stress.

1. How do paramedics describe their narrative identity and what it means to be a paramedic? Paramedics make sense of their experiences through their stories (McAdams & McLean, 2013). While their stories have been written, many have not taken the time to deeply reflect on their experiences (van Manen, 2014). Exploring how paramedics describe what they encounter in their role uncovers their lived experience (Creswell & Poth, 2018). Interpreting these pre-reflective stories offers insight into how their experiences shape their worldviews and contribute to resilience.
2. How do paramedics describe the distressing experiences they face, and the ways they navigate challenges in their work? The literature lacks consensus on what causes psychological distress among paramedics (Krupnik, 2019; Loewenthal et al., 2022).

While many assume that critical incidents are the primary cause of the high rates of posttraumatic stress disorder (PTSD) in first responders (Anderson & Dragatsi, 2024; Donnelly et al., 2020; Lawn et al., 2020; Oliveira et al., 2019), other research suggests the root is organizational and system factors (Betts, Stoneley, Anderson, et al., 2024; Bevan et al., 2022; Donovan, 2022). In fact, when paramedics describe their work, they often downplay the critical incidents they experience (Betts, Stoneley, Anderson, et al., 2024), though such incidents may exacerbate the stressors that are already occurring (Donovan, 2022; Hruska & Barduhn, 2021). Exploring how paramedics describe distressing experiences and how they navigate their day-to-day challenges can reveal the lived reality of their work and provide insight into how they sustain psychological well-being.

3. How do paramedics describe the ways in which connection, spirituality, values, and moral frameworks shape their lived experiences? Social connections and spiritual belief paradigms are tightly connected and play a key role in coping and resilience (Dolcos et al., 2021; Dunn & Robinson-Lane, 2020; García et al., 2017). Connection to peers and community provides a sense of belongingness and becomes a part of one's identity and strengthens the mooring tackle that protects from the push and pull of the ebbs and tides of paramedic work, enhancing psychological well-being (Lockhart & Perrott, 2024; Shakespeare-Finch & Daley, 2017; Vig et al., 2020). Connection, spirituality, values, and moral frameworks form intricate root systems, like shoreline mangroves that form a protective web, anchoring paramedics in the shifting tides and holding tight in the storms of their profession. Examining how paramedics describe these influences allows for a deeper understanding of the meanings that sustain or challenge them in their work, revealing essential aspects of their lived experience (van Manen, 2014).

4. How do paramedics describe experiences of transformation and growth? In contrast to the common perception that paramedic work will ultimately cause distress for the individual, Eschenbacher (2023) describes a shift in perception of self and the world. The outcome is change, a new reality that can cause distress or growth (Abdo & Schlösser, 2024; Coyte et al., 2023). For most paramedics, growth is realized (Puticiu et al., 2024). It is more than bouncing back but is a positive change that grows out of the adversity itself (Tedeschi & Calhoun, 2004). Mezirow (1991) describes a transformational learning process that is more than simply coping. It is active, not passive. Examining how paramedics describe their experiences of transformation and growth can illuminate the actions involved in pulling up their anchor and safely sailing the ocean of their work. It highlights how they learn from the winds of adversity and grow through temporary distress.

## Definitions

1. *Stress* - Stress is a mental and physical response to external stimuli that is perceived in a way that causes a biological sympathetic response characterized by increased heart rate and the hormonal release of adrenaline and cortisol into the body (Cohen et al., 2016; Sapolsky, 2018). This response triggers stimulation of other emotional and physical reactions to prepare the body and mind to protect itself from threats.
2. *Trauma* - Trauma is a mental state, often called a mental injury or wound, caused by stress or perceived threats to personal safety, characterized by negative emotional and physical responses that are usually long-lasting (American Psychiatric Association, 2022; Cohen et al., 2016; Krupnik, 2019; Sapolsky, 2018; Yehuda et al., 2015).

3. *Moral injury* - Moral injury is defined as a mental injury that has a lasting psychological, biological, spiritual, behavioral, and social impact, caused by perpetuating, or failure to prevent, witnessing, or learning about events or experiences that transgress moral beliefs or values (Barnes et al., 2019; D'Alessandro-Lowe et al., 2023; Doehring, 2015; Griffin et al., 2019; Koenig & Zaben, 2021; Lentz et al., 2021; Pearce et al., 2018).
4. *Resilience* - The ability to adapt to or overcome adversity; to bounce back from stressful or traumatic experiences (American Heart Association, 2017; Anderson et al., 2017; Anderson & Carleton, 2022; Austin et al., 2018; Giostra et al., 2025; Hayes, 2018; Scoles, 2020; Vaughan et al., 2020); the ability to deal with or withstand challenges (American Heart Association, 2017).
5. *Cope* - To cope (coping) is personal use of strategies to mitigate or recover from stressful or potentially trauma-causing experiences (Anderson & Carleton, 2022; Vaughan et al., 2020).
6. *Spirituality* - Spirituality is a framework for meaning-making (AbdAleati et al., 2016; Dolcos et al., 2021), based on an individual's set of values and beliefs, often related to a higher being and a moral standard (Dolcos et al., 2021).
7. *Posttraumatic growth* (PTG) - A positive stress-related growth that reesults in beneficial changes that occur after an individual has been exposed to any perceived stressful experience (Puticiu et al., 2024), in areas such as appreciation of life, personal strength, and changes in self-perception (Coyte et al., 2023).

## Summary

Chapter One introduced the study by situating paramedicine as a relatively young but rapidly evolving healthcare profession, tracing its historical development and how the inherent

stressors of the role increased alongside the professionalization of paramedicine. It highlighted how paramedics' lived experiences, professional identity, and cultural context both influence vulnerability to distress and foster the potential for growth. The chapter emphasized the gap in existing literature, which tends to focus on trauma and recovery, overlooking how many paramedics sustain well-being and even thrive or grow. Grounded in my personal and professional background, the Situation to Self section described how the study adopts a constructivist and post-positivist lens to explore how narrative identity, spirituality, worldview, and social supports contribute to preventative resilience while acknowledging the potential for bias from being an insider. The problem, the lack of literature regarding how preventative resilience functions within the lived experience of paramedics, is explored, and the purpose to explore how most paramedics maintain positive psychological well-being despite their emotionally and psychologically demanding work is outlined. The potential contributions to both paramedics and the broader first responder community that the study will provide were discussed, concluding with the central research question and sub-questions, supported by key definitions of terms.

# Chapter Two: Literature Review

## Overview

Paramedic work is fraught with potentially trauma-causing events. But what is it that paramedics are experiencing? Will it cause trauma in all paramedics? What is trauma? The definitions of trauma are very wide-ranging, making it difficult to distinguish between trauma and adversity (Krupnik, 2019). Definitions range from the broad view, where any experience that has long-lasting negative effects is considered traumatic (American Psychological Association, 2018), to the narrow view, where there must be exposure to actual or threatened sexual violence, serious injury, or death that causes psychological distress (American Psychiatric Association, 2022). The answer to this question will be influenced by where the definition is placed on this continuum.

The literature indicates that not only is there a high risk of suffering long-lasting negative effects arising from paramedic occupational exposure (Anderson & Carleton, 2022; Mausz et al., 2021), but there is also a high probability (Anderson & Carleton, 2022; Thomas, 2023). A scan of the literature reveals a wide range of estimates when it comes to the prevalence of psychological distress or mental disorders among paramedics and first responders. For example, recent studies have found:

- More than 20% of first responders exceed the hazardous cut-off point of 8 on the Alcohol Use Disorders Identification Test (AUDIT-10) (Bonumwezi et al., 2022).
- Approximately 23% of PSPs screened positive for PTSD and 26% for depression (Carleton et al., 2019).
- Approximately 20% of paramedics suffer from PTSD (Hoell et al., 2023).

- In ambulance personnel, approximately 11% suffer from PTSD, 15% from depression, and 27% from general mental distress (Petrie et al., 2018).
- It is estimated that 25% of paramedics will screen positive for PTSD, or other illnesses such as depression or anxiety disorders (Mausz et al., 2022a).
- Approximately 16% of paramedics meet PTSD criteria, with 28% screening positive for depression, 23% for alcohol abuse, and 7% for chronic perceived stress (Thomas, 2023).
- Approximately 44% of PSPs screen positive for one mental health disorder (Carleton et al., 2019; Carleton, Afifi, et al., 2018).

While differences in sampling practices and the reliance on self-report tools make it difficult to draw conclusions across studies, one constant finding is that the rates of psychological distress among paramedics and other first responders are consistently higher than those observed in the general population.

Regardless of methodology and the inconsistencies in the data, the paramedic role itself appears to be a strong correlate to the trauma they experience, suggesting that it is the nature of the work, rather than individual vulnerability, that contributes most significantly to mental health risk. Wagner et al. (2020) highlight this statistical inconsistency in their systematic review, but using the data from multiple studies, calculated that approximately 20% of paramedics suffer from mental distress or disorder caused by their occupation. Conversely, it can then be concluded that most paramedics do not. What is not clear is what differentiates these paramedics from those who do suffer from occupational-related posttraumatic injuries. What makes them resilient? This leads to many other questions, such as, What is Trauma? What type of trauma do paramedics experience? What is resilience? What factors or characteristics contribute to resilience? Ultimately, how do paramedics weather the shifting tides of their occupation?

## Theoretical Framework

The answer to this question depends on the lens used. Many frameworks use a coping or therapeutic lens, which leads to a recovery mindset (see Alonso-Tapia et al., 2019; Carleton, Korol, et al., 2018; Díaz-Tamayo et al., 2022; Duschek et al., 2020; Gonzalez et al., 2020; Maturlu, 2025; Ogińska-Bulik & Kobylarczyk, 2015; Rojas et al., 2022; Stelnicki et al., 2021; Thomas, 2023). Some incorporate personality traits and characteristics, and spirituality (see Alonso-Tapia et al., 2019; Diego-Cordero et al., 2022; García et al., 2017; Lockhart & Perrott, 2024; Maturlu, 2025), which adds a preventative filter, but the image is still superficial and a macro view, focusing on specific components, and does not portray what it is like to be a paramedic. Understanding paramedic experience can provide more depth of field, revealing how paramedics are affected. The answers to phenomenological questions live in the stories paramedics tell, how they understand their place in the world, and how they construct their identity (Hill & Eaton, 2023; Massicotte, 2021). This aligns with the constructivist nature of narrative identity theory (McAdams & McLean, 2013; McAdams & Pals, 2006), which serves as a key theoretical framework underpinning this study. The building blocks of identity construction are meaning-making. Reconciling experiences, making sense of them, can foster a change in worldviews. The potentially trauma-causing situations and moral challenges the paramedics experience can lead to what Mezirow (1991, 2012) refers to as 'disorienting dilemmas', events that challenge prior assumptions and can trigger personal transformation. Mezirow's (1991, 2012) transformational learning theory, a second underpinning theoretical framework for this study, suggests that individuals construct meaning through experiencing disorienting dilemmas and changing or making new meaning through critical reflection. In addition to narrative identity and transformational learning, this study is also informed by

posttraumatic growth (PTG) theory (Lindstrom et al., 2013; Tedeschi et al., 2017; Tedeschi et al., 2018; Tedeschi & Calhoun, 1996, 2014), which recognizes that individuals can experience positive psychological transformation following exposure to trauma aligning with the constructivist nature of both narrative identity and transformational learning. Using these three filters, a clearer picture of how paramedics make sense of their experiences can be created.

**Narrative Identity**

Paramedics make sense of their experiences through their stories (McAdams & McLean, 2013). Narrative identity offers a valuable lens for examining how paramedics construct meaning from their work experiences and their consequential worldviews, particularly when confronted with potentially trauma-causing situations and associated moral challenges. Through the use of existential reflection, narrative identity provides a sense of purpose by integrating experience with current perceptions and future desires. A key is a meaning-making process where paramedics construct 'redemption sequences' in their life stories. This involves reframing experiences in a way that may lead to positive outcomes, which can foster a sense of hope and confidence.

McAdams and McLean (2013), describe a two-step adaptation process that includes critical reflection on their experiences and a commitment to a positive resolution, looking for positive meanings in what they describe as 'difficult turning points'. Berman (2016) further explains that narrative identity is a lens that uses values, beliefs, and a sense of self-worth as filters, shaping how an individual interprets their experiences. This interpretive process can lead to both positive and negative outcomes (Berman, 2016; Hill & Eaton, 2023). Berman (2016) elaborates that major events that become central to their identity can define their story, which can paradoxically lead to either distress or growth, suggesting the danger is in the conclusions

paramedics make about themselves as a result. McAdams and McLean (2013) suggest that engaging with the stories in depth and focusing on the positive can aid in the meaning-making process and positive outcomes. The process of writing one's story can be a powerful tool that can foster well-being and transformation. Understanding how paramedics make sense of their experiences can provide insight into how they remain resilient and potentially transform.

**Transformational Learning**

Engaging in a meaning-making process that leads to transformation is akin to critical reflection and transformational learning (Mezirow, 1991, 2012). It includes generating new assumptions and interpretations that are more aligned or reasonable in light of experiences. It builds a frame of reference or worldview that explains the disorienting dilemmas paramedics may experience in their role. Mezirow's (1991) original theory described a 10-step process triggered by a disorienting dilemma and progressing through self-reflection, critical reflection, exploring new roles, planning, learning, experimenting, and incorporating new beliefs into one's identity. The association with learning is it is a revision of meaning that is freeing, not only changing meanings but also the 'way one knows', simultaneously revisiting beliefs and creating new meaning. It involves the construction of identity linking to narrative identity, but it also involves growth through adversity, linking transformational learning to posttraumatic growth. Understanding how paramedics experience transformational learning can illuminate how they adjust their worldviews to withstand the rigors of their work and possibly grow from their experiences.

**Posttraumatic Growth**

PTG is not a direct result of experiencing potentially trauma-causing events, but rather stems from the struggles to adapt in the aftermath (Lindstrom et al., 2013; Tedeschi et al., 2017;

Tedeschi et al., 2018; Tedeschi & Calhoun, 1996, 2014). It is highly influenced by openness to experience and a sense of optimism, which can aid in the cognitive processing required for transformation and growth. Like Mezirow's (1991, 2012) critical reflection, PTG involves a challenge to core beliefs and positive rumination (critical reflection) to process the experience. PTG resulting from adversity manifests in increased personal strength, spiritual or existential development, a renewed appreciation of life, and, most importantly, enhanced relationships with others. It is this relational interplay where relationships may be enhanced and be a protective factor simultaneously. This theoretical lens supports the exploration of how paramedics not only endure their work but also reconstruct meaning, values, and identity through their experiences. It acknowledges that growth often emerges through relational connection, moral reflection, and meaning-making, and complements the phenomenological aim of understanding the depth and nuance of lived experience. Understanding how paramedics grow from their experiences can provide insight into how they overcome distress.

Together, these three frameworks may illuminate how paramedics thrive and not merely cope, integrating or transforming their experiences into a coherent sense of self. They also offer insight into how their role-based experiences shape their stories, how they interpret those experiences, and how their worldviews are constructed. In this way, the frameworks will clarify why some paramedics experience distress, while most experience growth. This phenomenological design fits the purpose of the study as constructivism and interpretivism both align with the epistemological foundations of qualitative research and the phenomenological approach (Merriam & Tisdell, 2016). These foundational frameworks will guide the interpretation of what stress and trauma are, and how resilience influences change in both positive and negative directions.

## Related Literature

With this bedrock established, the literature will be examined to understand the anchor that holds firm, enabling paramedics to withstand the shifting tides of their work. The following review situates these concepts within both the material and immaterial dimensions of stress, trauma, and psychological injury, providing context for the experiences explored in this study.

## Injuring the Immaterial

Stress, resilience, trauma, and psychological injury are concepts that reside in both the material and immaterial domains. Stress is perceived, and how the individual responds to that perception will determine resiliency or injury. From the biological perspective, a sympathetic response is triggered, and once the threat is resolved, the parasympathetic system returns the body to allostasis (Cohen et al., 2016; Sapolsky, 2018). If the perceived stress or threat is not resolved or reconciled in the mind of the individual, return to allostasis may not occur, causing prolonged stress response symptoms, mental distress, and potentially negative physical outcomes. There is clear evidence of physical injury caused by prolonged stress responses, but there is no material evidence of injury to an immaterial mind. Injury is determined by causes, signs, and symptoms, begging the question, what is trauma? What is threatening to unmoor the anchor?

### Trauma

Trauma is a general term used by many in different ways, from describing adverse events to events that can cause PTSD. PTSD is a mental disorder that was first recognized in 1980 (American Psychiatric Association, 1980). Prior to that, what many now call trauma was known as shell-shock (or shock), combat fatigue, exhaustion, and many other terms (Loewenthal et al., 2022). Historically and today, trauma is generally associated with experiencing specific critical

or overwhelming events and is linked to negative psychological outcomes such as PTSD (American Psychiatric Association, 2022; Mayou & Farmer, 2002; Muldoon et al., 2019; Yehuda et al., 2015). Conversely, adversity is viewed as difficult life events that may or may not cause psychological distress (Krupnik, 2019; Muldoon et al., 2019). In other words, not all adversity is traumatic, and not all difficult experiences lead to trauma. Where is the line drawn? The narrow view links trauma to criterion "A" for PTSD (American Psychiatric Association, 2022), which defines the conditions that must exist to be considered a trauma-causing event, while the broader view encompasses all adversity (Krupnik, 2019). Some will qualify that adversity becomes trauma when it causes a 'lasting negative effect', but both lasting and negative can have many contextual interpretations. There is some consensus tying the definition of trauma to the body's pathological stress response, where the body cannot recover from a physical stress response and return to an allostatic state due to a breakdown of self-regulatory functions (Cohen et al., 2016; Krupnik, 2019; Sapolsky, 2018; Yehuda et al., 2015). This variation in the construct of trauma makes it difficult to truly understand what it is that paramedics are experiencing and causing stress, and the resultant potentially negative outcomes.

Depending on the context of the stress, it can be viewed from different perspectives. Historically, stress was viewed through three different lenses: epidemiological, psychological, and biological (Cohen et al., 2016). The epidemiological model defines stress as undesirable, uncontrollable, or threatening events that affect mental well-being (Cohen et al., 2016; Hartmann & Schmidt, 2020). The psychological model filters the epidemiological lens through the individual's subjective perceptions; the same event or circumstances can be perceived as stressful by one individual but not by another (Cohen et al., 2016; Krupnik, 2019; Lockhart & Perrott, 2024). The biological model views the impact of stressors on the body's autonomic nervous

system and its ability to self-regulate through the parasympathetic response (Cohen et al., 2016; Sapolsky, 2018; Yehuda et al., 2015). Cohen et al. (2016) suggest a stages model where the individual experiences each stage; experiences an event that is perceived to be stressful, which can cause dysregulation of the autonomic nervous system, and recognizes the existence through feedback loops between the three stages. What is important to note is that stress is the body's response to overwhelming events, events that exceed the individual's ability to cope at the psychological and biological level (Cohen et al., 2016; Sapolsky, 2018). Stress is not trauma, but it has the potential to cause trauma.

There are several different conceptual frameworks of trauma that fall under the umbrella term trauma in the literature. Many descriptive terms, such as secondary and vicarious trauma, burnout, and compassion fatigue, are used synonymously to describe the different types of trauma, but without consensus (Baker, 2015; Renkiewicz & Hubble, 2023). Renkiewicz and Hubble (2023) discuss vicarious trauma, which they suggest is a form of emotional countertransference from either direct or indirect exposure to trauma experienced by those they care for, and distinguish it from other types. For example, posttraumatic stress results from firsthand exposure to trauma, whereas vicarious trauma is a secondary exposure. Renkiewicz and Hubble (2023) also distinguish posttraumatic stress injury, burnout, and compassion fatigue from vicarious trauma, explaining that posttraumatic stress injury is caused by first-hand experience, burnout is related to organization and system issues, and compassion fatigue is related to prolonged or repetitive exposure. Rauvola et al. (2019), on the other hand, disagree, offer different descriptions, and integrate the different types. They suggest that vicarious trauma is due to the individual's 'empathetic engagement' with the trauma of another, subsequently conflicting with their beliefs and worldview; secondary trauma results from indirect exposure to an

individual's trauma, and symptoms are similar to posttraumatic stress symptoms; and compassion fatigue causes symptoms similar to those experienced by trauma sufferers and is comprised of a combination of burnout and secondary traumatic stress. They also coined an all-encompassing term, 'empathy-based stress', that combines empathetic experiences with secondary trauma (Rauvola et al., 2019). To illustrate, a paramedic is indirectly exposed to another individual's trauma (secondary exposure), and because they are empathetically engaged in the individual's experience (vicarious trauma), and the incident conflicts with their worldview, they experience a stress reaction. If such events occur often, when combined with organizational stressors, the person begins to experience compassion fatigue.

Others will make further distinctions between the same frameworks. Guitar and Molinaro (2017) also distinguish vicarious trauma from secondary trauma, agreeing that vicarious trauma is a result of repeated or continual exposure, usually occurs in care-givers, and has a deeper impact, whereas secondary trauma is a result of indirect exposure, is not related to compassion fatigue, happens in a shorter duration of time, and may affect a broader range of people such as family members. Others will group secondary trauma, vicarious trauma, and compassion fatigue together under the name of secondary trauma (Greinacher, Derezza-Greeven, et al., 2019). However, they agree that compassion fatigue is a result of ongoing empathetic exposure, and vicarious trauma is a deeper wound that affects beliefs and worldviews, whereas some studies simply see no distinction between secondary trauma and vicarious trauma (Austin et al., 2018). Greinacher et al. (2020) and Greinacher, Nikendei, et al. (2019) point out that secondary trauma is simply a name that has been applied to indirect exposure to a potentially trauma-causing event as described in the current criterion "A" for PTSD (American Psychiatric Association, 2022). A complicating factor to consider is moral distress, which is closely related to moral injury (Epstein

et al., 2020). Moral distress can occur when individuals act or are prevented from acting in a way that conflicts with their moral beliefs. Although moral distress and secondary stress are distinct concepts, they have some similarities in symptomology, such as loss of trust and avoidance. When combined with secondary stress, moral distress can lead to burnout syndrome. It should be considered that empathy is associated with an individual's perception of moral relevance and can have a direct effect on how they perceive moral conflicts, thus directly affecting their moral distress (Huniche et al., 2024). Ultimately, when paramedics experience secondary trauma, it often includes an empathetic experience. Using the definition of vicarious trauma resulting from empathetic engagement with secondary trauma that affects worldviews, a connection with moral distress, compassion fatigue, burnout, and moral injury is revealed, suggesting there is more than just role-based trauma that is contributing to paramedic distress.

**Moral Injury**

Moral injury (MI) in paramedics and first responders is a relatively new concept, and therefore, there is little research. In the broader literature, MI is defined as a mental injury that has a lasting psychological, biological, spiritual, behavioral, and social impact, caused by perpetuating, or failure to prevent, witnessing, or learning about events or experiences that transgress moral beliefs or values (Barnes et al., 2019; D'Alessandro-Lowe et al., 2023; Doehring, 2015; Griffin et al., 2019; Koenig & Zaben, 2021; Lentz et al., 2021; Pearce et al., 2018). Although MI often co-occurs with PTSD, it is considered a separate and distinct syndrome or construct. PTSD is fear-based, whereas MI is values-based, but the separation is muddy. Symptoms of MI include guilt, shame, anger, loss of trust, feeling of betrayal, self-condemnation, spiritual/existential conflict (loss of faith or meaning), difficulty forgiving oneself and others, and loss of hope; symptoms that meet diagnostic criterion "D" for PTSD (American

Psychiatric Association, 2022). By calculating the number of criteria "D" symptom combinations required to meet a PTSD diagnosis, and the probability of an individual experiencing one of the three criteria "D" that match MI symptoms, there is approximately a 67% chance that a person who meets the criteria for PTSD diagnosis will exhibit at least one of the moral injury symptoms. But like the relationship of adversity and trauma, the threshold for moral injury is not clear, making it difficult to determine injury.

Moral distress should not be confused with MI. Moral distress and MI can be conceptualized as being on a continuum, similar to the relationship between adversity and trauma (Lentz et al., 2021). Moral distress, like adversity, may provoke an emotional response, but typically, recovery is quick. Conversely, moral injury is like trauma in that resilience and coping are insufficient, or in the case of MI, the ethical dilemmas cannot be reconciled, and the resulting psychological disruption may interfere with daily function (Huniche et al., 2024; Lentz et al., 2021; Rabin et al., 2023). The research shows that moral distress is more associated with ethical dilemmas, whereas moral injury is more associated with past actions (Epstein et al., 2020), and is connected to burnout, PTSD, and depression (Griffin et al., 2023). It is important to note that potentially morally injurious events (PMIE), like trauma, are appraised or interpreted by the individual and may occur at the individual, interpersonal, organizational, or system levels and contexts. Moral distress, if left unaddressed, can progress to moral injury.

Much of the MI literature emphasizes the differences between MI and PTSD. Moral injury (MI) is not a mental disorder, but it has been known to exacerbate anxiety, depression, and PTSD (Koenig & Zaben, 2021; Rabin et al., 2023; Tunç & Candemir, 2023). What differentiates MI from PTSD is that MI is highly related to the individual's spiritual and ideological belief systems and how their thoughts and emotions are filtered through them (Doehring, 2015;

Kaufman et al., 2024), and the missing hallmark PTSD symptoms associated with intrusion, avoidance, and alterations in arousal (Griffin et al., 2019; Knobloch & Owens, 2024; Tunç & Candemir, 2023). However, the negative outcomes of MI are more closely aligned with the presence of PTSD than with the experience of a PMIE itself. While small to moderate associations have been found between PMIEs and PTSD, the relationship between MI symptoms and PTSD is stronger (Griffin et al., 2019). Griffen et al. (2019) suggest that MI is more closely related to internal psychological outcomes than to the PMIE and may be conceptualized as a component or sequela of PTSD, driven by morally conflicting processes. Due to the frequency and repetitive nature of exposure to severe injuries and violence experienced by first responders, they are at a heightened risk for developing MI, which may in turn contribute to the onset or exacerbation of PTSD (Griffin et al., 2019; Tunç & Candemir, 2023). Barnes et al. (2019 add that not only does MI frequently co-occur with PTSD, but it was also found that not all PTSD index events were ones that are fear or threat-based, causing one to question the separation of moral injury and PTSD. However, brain studies suggest values-based MI or PTSD underlying neurobiology differs from that of fear-based PTSD (Barnes et al., 2019). Ultimately, MI has been identified as a barrier to recovery from PTSD and should be treated concurrently alongside treatments for PTSD (Pearce et al., 2018; Tunç & Candemir, 2023). A salient point when it comes to stress, trauma, and MI is that what constitutes stress and MI is in the perception of the individual (Barnes et al., 2019; Roth et al., 2022; Yehuda et al., 2015), and there is potential for adverse outcomes that can affect an individual's mental and physical wellbeing muddying the waters of what paramedics are actually experiencing and what the causes are.

**Causes and Risks**

The shifting tides pull on the paramedic's anchor in many directions. Several factors have been identified that contribute to decreased first responder well-being, such as shift patterns, irregular working hours, heavy workload, poor leadership, and a perceived lack of support (Betts, Stoneley, Anderson, et al., 2024; Bevan et al., 2022). Additionally, these factors can lead to sleep disturbances, which, in turn, can cause increased stress and poor health outcomes. Other organizational factors that can contribute to poor well-being include a lack of, or barriers to accessing support, cultural stigma, stoicism, and negative attitudes towards emotional expression (Thomas, 2023; Traynor et al., 2024). Conversely, professional satisfaction, teamwork, collaboration, and a shift toward organizational culture and respect for all, when combined, contribute to positive outcomes. An unexpected finding was that while these factors are common in the literature, the potential psychological effects of actual emergency work are rarely mentioned (Betts, Stoneley, Anderson, et al., 2024), causing one to question the relationships between the different organizational and systemic factors and potentially trauma-causing events as systemic and organizational factors are often cited as the root of distress (Betts, Stoneley, Anderson, et al., 2024; Bevan et al., 2022; Donovan, 2022). The nature of the profession is rife with potentially stressful events and critical incidents, described as specific events that can overwhelm the individual's ability to cope and can potentially cause distress (Mausz et al., 2022b; Thomas, 2023), as well as the potential for a cumulative effect. (Hruska & Barduhn, 2021). Shift work and routine high call volumes can increase stress levels, and are exacerbated by critical incidents like unexpected complications or sudden death, multiple casualty events, and other incidents beyond the routine. According to Carleton et al. (2019), events that cause sudden violent death(s) or human suffering are the leading causes of distress for paramedics and first

responders, but what is not explicit is the relationship with organizational or other external factors, critical incidents, and MI.

Viewing the factors that can affect paramedic wellness, a connection to MI is revealed. Situations that have been observed to cause MI in paramedics include providing care for individuals or victims of individuals, whose actions they believe are reprehensible, or being required to administer treatment under protocols that may be harmful or futile, which can increase the stressors that are perceived alongside critical incidents (Rodrigues et al., 2023). Organization and system factors can further exacerbate moral injury. These include being denied adequate breaks, complaints and recommendations being dismissed, or a lack of organizational support, facing pressure to withdraw concerns, and working within underfunded systems that result in poor service delivery and limited resources. Additional factors such as long hours and overtime, violation of patient autonomy, decision making under pressure, physical or verbal violence from patients or relatives, emotionally intense conversations with families of patients, and perceived undercompensation can contribute to MI (Rabin et al., 2023). MI is linked to clinically significant psychological distress, depression, and PTSD, possibly being a key factor in stressful paramedic experiences.

A complicating factor is that paramedics feel a self-imposed pressure to perform effectively. Paramedics often feeling overwhelmed from information overload and the emotional burden of their responsibilities, particularly when managing multiple tasks in emergency situations (Duffee & Willis, 2023; Hill & Eaton, 2023; Rauvola et al., 2019). To compensate, when providing patient care, paramedics often dissociate from their surroundings to focus on the task at hand (Duffee & Willis, 2023; Stelnicki et al., 2021). They also tend to emotionally isolate themselves, believing those outside of their profession would not understand, augmenting the

effects of stress. Muddying the waters are common personality traits that contribute to paramedic stress and burnout, including perfectionism and introvert tendencies, with neuroticism being the most dominant (Betts, Stoneley, & Picker, 2024). These traits can lead to paramedics being very self-critical.

Compounding day-to-day stressors and critical incidents is the stress imposed by the paramedics themselves. Such self-imposed stress can be traced back to a lack of preparation and training on the realities of the profession versus the romance (Mausz et al., 2021, 2022a). Paramedics often experience cognitive dissonance, which occurs when there's a mismatch between a paramedic's concept of what their role is and their actual role (Hill & Eaton, 2023; Mausz et al., 2021, 2022a). This incongruence can arise due to the paramedic's self-perception of being an emergency responder when responding to non-urgent calls, or when repeatedly being called out for system abusers. Additionally, paramedics are ill-prepared and often disillusioned by complex health systems and witnessing social inequities. The resulting stress is less about the criticality of calls and more about the compatibility of the work and their perception of their role (Ericsson et al., 2021; Mausz et al., 2021, 2022a). Regular exposure to potentially trauma-causing events on top of organizational stressors and role dissonance, combined with a sedentary lifestyle practiced by many paramedics, contributes to many physical ailments, such as cardiovascular disease, and issues with mental health, such as PTSD, anxiety, and depression (Betts, Stoneley, Anderson, et al., 2024; Thomas, 2023). In comparison, organizational stress, role identity, and the resulting cognitive dissonance seem to align more with moral distress and MI than it does with trauma-related mental well-being and disorders. Although the waters remain murky, the mix of contributing factors is increasingly visible, raising the question: What strategies are paramedics who remain resilient using to maintain their mental wellness when

others who are exposed to the same potentially trauma-causing or morally injurious events cannot?

## Escape, Change, Withstand, or Bounce Back

Managing stress, traumatic injury, and moral injury is multi-dimensional. Since the causes of stress are often environmental in nature (Khazaei et al., 2024), managing workplace stressors through change can lead to a more positive work environment and potentially fewer stressors over time (Arble & Arnetz, 2019). Change can be related to the transformation of assumptions, perceptions, or beliefs that create an environment of acceptance for the individual and usually involves meaning-making (Smith-MacDonald et al., 2021). Protective strategies such as critical reflection to find meaning in experiences can lower the severity of stress reactions (Hruska & Barduhn, 2021; Wolff, 2020). Other strategies are often used, such as taking breaks, quiet time, exercising, and connecting with others or social support, but these strategies are secondary to the deeper work of making sense of experiences. For some, escape is an alternative strategy and can include removing oneself from the situation (changing department, location, or vocation). But escape can become avoidant, and in its extreme form, can end in suicide (Smith-MacDonald et al., 2021). These realities raise important questions: What does it truly mean to be resilient, and what internal or external factors support that resilience over time?

### Resilience

There are several variations of the definition of resilience. Most focus on recovery from stressful circumstances involving behavior modification and strategies to adapt to or overcome adversity; to bounce back from stressful or traumatic experiences (American Heart Association, 2017; Anderson et al., 2017; Anderson & Carleton, 2022; Austin et al., 2018; Giostra et al., 2025; Hayes, 2018; Scoles, 2020; Vaughan et al., 2020). Raptis (2023) views resilience as the

ability to persevere, aided by traits such as self-efficacy and flexibility, as well as positive coping strategies. Most research views resilience through a cognitive lens, but Andersen et al. (2023) have taken a biological approach and tied resilience to the ability to control autonomic nervous system responses to stress, suggesting training on such control can enhance resilience. In comparison, Hayes (2018) connects resilience to the capacity to apply cognitive coping strategies, focusing on meaning-making, making sense of one's experiences. Recovery or rehabilitation after experiencing trauma is more common than education and preventative strategies, with psychotherapy as the preference. However, where prevention strategies were reported on, such as resilience training and health promotion programs, positive outcomes were identified (Antony et al., 2020). Although being able to withstand is often viewed as the absence of posttraumatic stress symptoms, such as alterations in mood (depression, anger, anxiety), and arousal (Andersen et al., 2023), the American Heart Association's (2017) report on resilience includes a preventative component, defining resilience as the ability to deal with challenges or withstand, to bounce back or recover, and thrive or grow in the face of adversity, such as stressors or changing demands, highlighting the inconsistency of perspectives in the literature.

Although there is some emerging research on resilience as a prevention strategy, like trauma, the popular opinion of resilience focuses on a single construct: coping strategies. Anderson and Carleton (2022) break resilience down into three coping mechanisms: Personal strategies such as acknowledging problems or struggles with stress reactions and seeking help when needed, maintaining positive and supportive family relationships, and supportive working environments. Vaughan et al. (2020) expand the coping mechanisms into five domains: how individuals perceive themselves and their future, how they structure their lives, social and family cohesion, and access to support from friends or family members. Other studies frame resilience

as a preventative factor based on self-care, focusing on diet, sleep, exercise, and other healthy living behaviors to strengthen the individual so that the effects of stress can be mitigated (Paiva-Salisbury & Schwanz, 2022). There is also evidence that resilience can be enhanced by support systems, institutional culture, and other controllable systems or environmental factors (Paiva-Salisbury & Schwanz, 2022; Raptis, 2023). The strength of resilience is built on the tackle used to hold the anchor.

Resilience can be a protective shield where paramedics access their internal resources. Openness to new experiences, a sense of humor, determination, and perseverance are important factors, resulting in lower levels of perceived stress (Piotrowski et al., 2021). Some studies have added factors, such as a positive outlook on life, focusing on solutions rather than problems, and remaining in the recovery mindset (Scoles, 2020). Carter et al. (2019) explain that such a mindset is the ability to revise perspectives or frames of reference, tying the concept to personal identity and transformational learning. One research study found that paramedics hold certain personality traits that contribute to a degree of inherent resilience (Lockhart & Perrott, 2024). Relative to the general population, paramedics demonstrated significantly greater conscientiousness, extraversion, and agreeableness, alongside lower levels of open-mindedness and negative emotionality. These patterns suggest that paramedics, despite working under high stress conditions, possess predisposed resilience due to lower negative emotionality scores compared to normative groups (Lockhart & Perrott, 2024). However, when it came to resilience, the study offered mixed findings on whether personality traits could reliably serve as indicators or stand-ins. Giostra et al. (2025), on the other hand, discuss how a combination of character traits, hardiness (commitment, control, and viewing challenges as opportunities), and resilience skills and strategies, such as coping tools and social support, can protect first responders from the

effects of stress. This suggests that personality traits should not be considered as a substitute for resiliency, but when combined with other tools, a stronger rope, a heavier chain, and a bigger anchor, they can help to withstand the pull of the tide and hold fast. Individual characteristics and the implementation of positive coping strategies can provide protection, suggesting a broader view of resiliency, to move beyond bouncing back and restoring function, as one could question an individual's pre-adversity functioning levels. A new focus could be improving pre-adversity functioning levels and building capacity to withstand the potential risks and threats, a preventative factor.

**Resilience Training**

In recent years, there have been many resilience programs that have been created in attempts to build that capacity. It has been observed that new paramedics who receive resilience training can significantly improve their overall resilience to stress, including in the areas of self-reliance, equanimity, perseverance, and existential aloneness (Anderson et al., 2017). Although improvement is seen in many areas, meaningfulness, a potential key to resiliency, was not observed to have any significant improvement, suggesting that formal training may not foster skills in meaning-making of potentially trauma-causing events. In contrast, Wild et al. (2020) caution that the efficacy of pre-incident training is limited. They suggest strategies, such as pre-screening for general risk factors to ensure a resilient workforce, have poor predictive capability, adding that although psychoeducation can improve knowledge and decrease the stigma attached to mental health, it is found to be ineffective in building or improving resilience and should not be solely relied on. Carleton, Korol, et al. (2018) agree, stating that while mental health stigma post psychoeducation decreases, they did not observe any changes in mental health in follow-up surveys. What has been found to be effective, when used in conjunction with the pre-screening

and psychoeducation, was focusing training on modifiable risk factors and training for leaders that include awareness of employee mental health challenges, how to respond and support individuals, and how to create a culture of camaraderie and informal peer support (Rossouw et al., 2024; Wild et al., 2020). Using a combined methodology addresses several areas using a multidimensional and flexible approach to fostering resilience.

A common perception of many is that resiliency is a fixed trait, becoming a barrier to learning new resiliency skills. The perception of resilience is tightly woven with stigma, where those who do not hold resilient characteristics are perceived as not strong enough to handle the work (Crane et al., 2022). Training attempts to change this perception. Resiliency can be viewed as being on a continuum, and skills can be enhanced by capitalizing on existing strengths rather than focusing on deficiencies. Learning new skills like mindfulness-based resilience training (Kaplan et al., 2017) or mind-body tactical resilience training (Tan et al., 2024) can change first responders' perception of stressful events and has been observed to improve paramedic wellness. Still, resilience training is mainly based on a reactive approach and is often focused on individualized interventions (Rossouw et al., 2024). Relational, organizational, and systemic risk factors must also be addressed in training and in real-world applications. Although resiliency is a description of an individual’s ability to withstand, or bounce back from, adversity, the ability is strongly influenced by external factors such as social support systems, shift work, and bureaucracy (Duschek et al., 2020; Hayes, 2018; Lockhart & Perrott, 2024; Safori et al., 2022). Fostering a culture of resilience can strengthen individual resilience.

Stigma towards mental health in paramedic culture can also have deleterious effects. The Road to Mental Readiness (R2MR) training program has been observed to reduce mental health stigma, which in turn can improve paramedic culture (Szeto et al., 2019). Training like the

R2MR program can aid in enhancing resilience, but this study cautioned that although the improvement in resilience was statistically significant, the effect size was small. Conversely, Carleton et al. (2018) in their study, found no significant changes in resilience or mental health symptoms at six- and 12-month follow-up assessments after training, although the R2MR training continued to help improve the understanding of traumatic stress, coping, and mental health, and reduce the stigma attached to mental illness. Although these types of programs are strong for reducing stigma, they appear to be weak in improving resilience.

In general, resilience training has mixed results. Although there are often significant differences in coping strategies used by workers pre- and post-training, the change is in the type of strategy being used and not an increase in use (Scuri et al., 2019). However, inferences can be made about the effectiveness of training, but conclusions cannot be made regarding the effectiveness of training, as both resilience and coping strategies may have come from prior life experience or previous training. Additionally, one can infer that both resilience and coping strategies help individuals manage stress, and training in both aspects is beneficial. Still, it highlights that life experience and personal characteristics may also contribute to overall coping ability and resilience, which can be leveraged. For example, as discussed further below, paramedics informally learn to emotionally disconnect while performing patient care to focus on the technical aspects of the job. Similarly, the before operational stress (BOS), a training program designed to help individuals become more resilient with a focus on self-awareness, relationships, and communication, teaches operational emotional disconnection and reconnection, a strategy already used by many first responders to detach from the immediate emotions while performing their work (Stelnicki et al., 2021). Fonseca et al. (2021), on the other hand, suggest that training should focus on the individual's perception of stressful events and

perception of self. Changing these perceptions can foster functional or positive coping and mitigate negative coping.

**Coping**

Coping is central to most resiliency conceptions and is often defined as managing one's response to stress. It is essentially a form of situational and emotional control that includes efforts to modify external situations or regulate internal emotional reactions (Alonso-Tapia et al., 2019; Duschek et al., 2020). Paramedics tend to adopt various coping tools depending on timing. Oliveira et al. (2019) note that planning might occur before, during, or after an event. For example, emotional detachment may be functional during an event, with adaptive strategies applied once the event concludes. Adaptive strategies may include humor, reappraisal, religious or spiritual practice, mindfulness, and social connection (Duschek et al., 2020; Rojas et al., 2022; Stelnicki et al., 2021), although Miller and Brown (2021) caution that humor and behavioral disengagement, though often categorized as adaptive, can increase the risk of burnout. Alternatively, Bilsker et al. (2019) outline five pillars of sustainable coping: a balanced work routine with adequate rest; self-acceptance, which encourages a learning mindset through self-compassion; trusted social supports that offer a meaningful perspective; work that aligns with personal values and contributes to moral integrity; and physical self-care to maintain the energy required to stay resilient. These pillars go beyond the traditional response strategies used by most to modify situations or regulate emotions, and incorporate a more balanced and preventative approach, offering different techniques for setting an anchor.

The type of coping strategies used will determine if the individual will be able to cope or not. Coping strategies are categorized in various ways: approach versus avoidance (Arble & Arnetz, 2017), adaptive versus nonadaptive (Díaz-Tamayo et al., 2022), or healthy versus

unhealthy (Warren-James et al., 2022). Functional strategies aim to resolve problems or effectively regulate emotional intensity, whereas dysfunctional coping, by contrast, involves avoidance or emotional disengagement, such as denial, substance use, behavioral withdrawal, or self-blame (Fonseca et al., 2021). The contrast between the opposing positive and negative can be clearly seen, but Kucmin et al. (2018) also distinguish between emotion-focused coping (regulating the emotional state) and problem-focused coping (changing or eliminating the stressor) strategies. While both are thought to be helpful, emotion-focused strategies, particularly when used in isolation, can contribute to rumination as opposed to suppressing distressing thoughts, leaning towards the unhealthy side of the spectrum. Approach-based or adaptive strategies, like mindfulness, focusing on technical aspects of the work, positive self-talk, acceptance, positive reinterpretation, and seeking social support, are considered healthier responses (Warren-James et al., 2022), but they are not as frequently employed as nonadaptive strategies (Díaz-Tamayo et al., 2022). Scholarly opinion is divided on this topic, as Díaz-Tamayo et al. (2022) report more frequent reliance on avoidant or emotionally disengaged strategies, such as denial or distraction, where Miller and Brown (2021) suggest that paramedics prefer acceptance and active coping. Complicating matters, some avoidance strategies can yield both protective and harmful effects.

### *Avoidance and Acceptance*

It has been suggested that avoidance strategies, like taking breaks, can have a positive effect. Arble and Arnetz (2017) note that strategies like taking breaks or temporarily disconnecting from emotional content (self-distraction), or even occasionally calling in sick, can relieve distress in the short term, but may increase risk over time if not used thoughtfully. Gerhold et al. (2022) observed a negative relationship between emotion-based coping and

resilience, primarily due to misusing strategies like self-distraction. While paramedics will often use self-distraction to manage overwhelming feelings, effectiveness is short-lived; more promising are strategies grounded in self-efficacy, ambiguity tolerance, problem-solving, and social support used not as an outlet for venting but as a mechanism for making sense of events or constructive perspective-taking (Conway & Waring, 2021; Gerhold et al., 2022). Lockhart and Perrott (2024) add that emotion-focused strategies may reduce perceived stress, focusing on acceptance, whereas problem-focused techniques did not have the same impact. Rojas et al. (2022) agree, suggesting acceptance is associated with improved psychological outcomes and self-efficacy. For paramedics, the capacity to accept distress without trying to control or suppress it can reduce rumination and its potential adverse effects, highlighting a strong relationship between acceptance and self-efficacy.

### *Self-efficacy*

Self-efficacy, the belief in one's capacity to handle adversity and mobilize resources, is essential to resilient behavior. Acceptance, an adaptive coping strategy that fosters self-efficacy (Díaz-Tamayo et al., 2022), plays a buffering role against self-criticism, which is strongly associated with reduced job satisfaction, increased stress, and both mental and physical health deterioration (Lowery & Cassidy, 2022; Rojas et al., 2022). This way, self-efficacy and acceptance form a protective loop sustaining long-term resilience. Those high in self-efficacy tend to interpret stressful work demands more positively, are less likely to use maladaptive strategies, and are more resourceful in accessing support. Conversely, Fonseca et al. (2021) found that non-acceptance of self and high perceived stress were significant predictors of dysfunctional coping. Higher perceived stress can interfere with self-acceptance, and lower self-acceptance can moderate stress levels. Dispositional optimism, understood here as a form of life

acceptance, is linked to decreased PTSD symptoms in paramedics, primarily when used to buffer the emotional risks of coping through emotional regulation alone (Kucmin et al., 2018). Nevertheless, the presumed benefits of coping strategies may be overstated. Rojas et al. (2022) observed minimal or no significant association between many coping mechanisms and improved health or well-being. Diggin et al. (2023) note little convincing evidence that any coping style; problem-focused, emotion-focused, social-support seeking, or avoidant, meaningfully reduces burnout, and some suggest may even cause distress (Arble & Arnetz, 2017; Diggin et al., 2023; Vagni et al., 2020). Strategies, such as venting or emotional storytelling, have also been found to exacerbate distress by encouraging re-experiencing rather than resolution. Emotion-based strategies in general were associated with increased emotional exhaustion, depersonalization, and guilt. Albeit, much of the coping literature fails to consider how they work together with other factors and ignores personal identity and individual characteristics, each only focusing on specific components. As suggested above, strategies used in combination can enhance positive coping. Incorporating coping strategies with social and peer support may contribute to a stronger hold on the seabed.

**Social and Peer Support**

A common component of PTSD prevention strategies and education programs surrounds social support, such as noticing those who may withdraw socially, or making recommendations to talk to someone if struggling. Social support is linked to enhanced psychological health and reduced distress, is protective in nature, and a core component of an individual's psychological makeup (Lockhart & Perrott, 2024; Saheem et al., 2024; Vig et al., 2020). Social support is a type of support received from others through relationships and groups. It is viewed as a predictor of outcomes for paramedics experiencing potentially trauma-causing situations, but it is not the

actual quality or number of contacts that are found to be helpful, but how the individual perceives social support (Lockhart & Perrott, 2024). Just having a sense of belongingness was found to be directly correlated with lower distress levels and reduced psychological distress (Shakespeare-Finch & Daley, 2017). Vig et al. (2020) agree, finding a negative correlation between perceived social support and posttraumatic stress symptoms. This suggests that how paramedics feel supported is more important than simply having support. As a result, paramedics are less likely to seek support from their supervisors, employee assistance programs, and peer support services, suggesting paramedics may perceive these efforts as insufficient or unreliable.

This highlights the importance of social support and how it is implemented. Social support acts as a moderator between occupational stress and increased burnout, reducing the impact of secondary traumatic stress (Saheem et al., 2024). Higher social support is also associated with greater compassion satisfaction and lower distress, suggesting a connection with improving quality of life, with positive relationships being predictors of paramedic well-being (Lowery & Cassidy, 2022). Strong supportive communities can aid in resilience by providing diverse resources and consistent social and group norms for desirable behavior (Scoles, 2020). Healing can be fostered within a community, whether the community is related to the individual's personal life or peers from their profession, supported by natural, reciprocal community interactions, rather than solely through traditional treatment. Fostering an accepting and supportive culture can improve the resiliency of paramedics.

Many organizations have developed programs to encourage internal social support and build on natural social support. There are three general models of organizational peer support: peer-led, peer-enabled (professionally led and peer-supported), and peer-partnership (a collaboration between professionals and peers) (De Terte et al., 2014; O'Toole et al., 2024; Price

et al., 2022). The fidelity and diversity of the programs make it difficult to measure and compare effectiveness (Price et al., 2022). Therefore, there is little evidence of actual beneficial outcomes. In general, it has been observed that peer support programs can significantly improve job satisfaction and perceived organizational support among public safety personnel (PSP) and ambulance personnel (Fallon et al., 2023; Oliveira et al., 2021). Although improved health and psychological well-being are associated with peer support, the results are not consistent (Oliveira et al., 2021). This could be due to the trust levels of PSP and paramedics regarding the acceptance of formal programs, as those with low pre-existing trust gain less than those with higher levels (Conway & Waring, 2021; Horan et al., 2021). The paramedic's perception of the peer support program can enhance or hinder the success of the program (Conway & Waring, 2021; Tessier et al., 2021). Pre-existing mistrust amongst paramedics can lead to poor adherence and the program's longevity, suggesting that trust between peers and the organization is a key factor affecting adherence. Considering the strengths of a social community in contrast with the barriers to formal peer support programs, fostering an accepting community may have a more positive effect than creating a formal program.

From a leadership perspective, creating an accepting culture is limited to management styles, policies, system rules, and the development of formal programs. When asked directly about what should be included in a peer support program, first responders suggest that peer support should be an ongoing, daily activity, not just an activity that may occur after a critical incident (Fallon et al., 2023; Oliveira et al., 2020). Secondly, peer supporters should have appropriate training and be good listeners, optimistic, and approachable. Some barriers for first responder engagement with peer support include resistance to new ideas and fear of stigma when discussing personal experiences as they are related to meanings, core beliefs, and identity

(Oliveira et al., 2020; O'Toole et al., 2024). This reinforces the need for resilience training that focuses on stigma towards mental health and the need for a natural social community (Lowery & Cassidy, 2022). Gains could be made by creating opportunities for social connections that are interwoven into training activities or sponsoring group leisure activities. This would not only allow paramedics to share experiences with each other, but also share values and norms, which can have an effect on personal identity.

**Identity**

The relationship between identity, resilience to stress, and well-being is complex. An individual's identity is identified by their paradigm; the set of meanings an individual creates that determines who they are and their place in society (Hill & Eaton, 2023). It is their personal narrative, distinct and different from personality and characteristic traits (Adler et al., 2016), the lens through which one views oneself, how one interprets oneself, and one's place in the world (Massicotte, 2021; Tangherlini, 2000). Narrative identity, or self-storying, is written from life experience and specific events, and contributes to an individual's self-perception, evolving over time. The core of narrative identity involves a sense of purpose and meaning. It connects the past with the present and potential future, contributing to psychological well-being, and is grounded in lived experience (Baldwin et al., 2023; McAdams & McLean, 2013). While narrative identity is individually constructed, it does not develop in isolation. Outside influences can exist. Some may form their beliefs from multiple sources, including religion and humanistic beliefs, or base their belief paradigms on knowledge and philosophy (Baldwin et al., 2023; Hill & Eaton, 2023). Others are influenced by the groups they belong to, such as religious groups where much of their identity is received from the sacred teachings, or workplaces where identity is derived from cultural expectations, linking a person's narrative identity to their social groups and how they

contribute to overall resilience. Regardless of the source, narrative identity begins with a belief system that is influenced by the world we surround ourselves with (Muldoon et al., 2019). In this way, identity becomes both personal and social, influenced by external associations. Maintaining a strong commitment to a 'like' group or tribe can foster resilience.

While a strong sense of identity can support resilience, trauma has the potential to destabilize it. Conversely, negative responses to potentially trauma-causing events that undermine these social identities can be amplified (Muldoon et al., 2019). Maintaining a coherent sense of self is crucial for mental well-being, whereas a poor perception of self and a lack of a coherent identity are associated with poor mental health (Massicotte, 2021). Potentially trauma-causing events in the paramedic context can affect identity negatively and can cause individuals to reconsider who they are. Mausz et al. (2021) call this construct of narrative identity, role identity. Paramedic role identity focuses on themes like perceptions of being an empathetic caregiver, a thrill seeker who derives excitement from emergency situations, pride in their role as paramedics and helpers, and self-efficacy. Interestingly, in a study of 589 paramedics at one site, there was no connection between these specific identity themes and mental well-being. However, in a follow-up qualitative study with a smaller sample at the same site, two more themes were identified: problem-solving and protector, and conflicts with these two themes often led to emotional, psychological, and existential distress (Mausz et al., 2022b). Yet identity is not static. It can shift and adapt in response to adversity or potentially trauma-causing events. For some, the ability to rewrite their own stories in response fostered adaptability and growth, revealing the complexity of being both a potential cause of perceived stress and the potential for growth. The adversity of trauma and identity has a reciprocal relationship where trauma can affect identity, but identity can also provide an alternative lens to view potentially

trauma-causing events or situations (Berman, 2016; Berman et al., 2020). Events that are traumatic for the individual can cause paramedics to re-evaluate their roles, goals, and beliefs, which can result in a state of anxiety or, on the contrary, a turning point that leads to growth. This re-evaluation can destabilize their sense of self, or, alternatively, become a catalyst for transformation.

The direction of that transformation, toward distress or growth, often depends on the underlying themes of narrative identity. The lens through which the individual views the world, their identity themes, will influence the path towards distress or growth. Narrative identity, when grounded in themes like agency (personal autonomy), communion (interpersonal connection), and redemption (negative to positive shifts), has been associated with psychological well-being (McLean et al., 2020). These themes, having a sense of personal autonomy, meaningful connection with others, and finding something good in something hard, reflect how people process life events and make sense of their experiences. This reflects how goals, emotions, relationships, and a sense of purpose are deeply interwoven in how people make sense of their lives. Stories that are infused with emotionally rich content play a critical role in shaping and reflecting an individual's mental health. Ramasubramanian et al. (2022) found that resilience appears to be a mediator between narrative identity themes and psychological outcomes. Those with stronger personal agency had better resilience. Those on the lower end of the scale were less resilient and were correlated to increased maladaptive coping strategies. In light of this, fostering reflective engagement with one's evolving self-narrative becomes essential. Massicotte (2021) notes that fostering a growth mindset, where different aspects of the individual's story, past, present, and future, can be explored, allows individuals to reflect on who they were, who they

are, and who they want to become. It is not just about recovery, but about re-storying. And that new story, for many, can become a turning point.

**Spirituality**

Re-storying, or reconstructing and reframing negative thoughts and perceptions, can improve psychological well-being. Greater improvement can be realized when viewed through a spiritual lens (Dolcos et al., 2021; García et al., 2017). In other words, viewing challenging circumstances through a spiritual lens can turn challenges into opportunities for growth or learning, which can foster resilience (Dolcos et al., 2021; García et al., 2017; Ozcan et al., 2021). The communal aspects of spirituality or religion can also play a key role by offering social support and shared meaning, which enhances one's coping capacity. Religious coping is associated with cognitive reappraisal and coping self-efficacy, indicating that individuals who engage in religious coping are more likely to habitually reframe their thoughts and feel more confident in their ability to handle stress (Dolcos et al., 2021). This coping mechanism is not only proactive but also protective. Religious coping is negatively correlated with symptoms of anxiety and depression, suggesting that it may be an effective strategy for reducing psychological distress. The function of religion, formal participation and adherence to spiritual precepts and concepts, is often cited as an effective resilience strategy (AbdAleati et al., 2016; Khazaei et al., 2024). In this sense, spirituality becomes a framework for meaning-making. The accountability associated with many religions fosters self-examination and helps individuals find meaning in their hardships, increasing the individual's ability to cope with stress, depression, and anxiety. When individuals incorporate faith and reliance on God (in a Christian sense), there is a negative correlation with overall psychological complaints, depression, and stress (Oudijn-van Engelen et al., 2022). This relationship is often described as collaborative rather than passive. Such a

relationship is a collaboration with God using prayer and meditation, which in turn provides strength. Conversely, a wait-and-see-what-God-will-do, a passive attitude, has the opposite effect, similar to self-help approaches.

Divine relationships are based on a foundation of belief systems that provide strength to withstand. The religious values held by healthcare workers foster self-awareness, patience, and hope, which strengthen them and allow them to withstand the stressors they experience (Diego-Cordero et al., 2022). The spiritual belief systems offer what is described as inner peace or a sense of security. Holding a spiritual mindset alters the perception of stressors (Dolcos et al., 2021; García et al., 2017). It acts as a preventative factor, blocking negative emotions such as fear and anxiety, and for some, fostering personal and social development or posttraumatic growth through adversity and meaning-making. Conversely, such a mindset can have an opposite effect. Although there is an association between higher levels of spirituality and lower levels of stress (Maturlu, 2025; Mirzaei et al., 2022; Raza et al., 2022; Weinberg & Elimellech, 2022), spirituality has an ambivalent role in stress and resiliency, potentially reducing and increasing moral distress (Kubitza et al., 2022). Faith and hope are often used to envision a better future, and critical reflection helps individuals recognize positive aspects and regain a sense of meaning and purpose. However, those who practice spirituality may be more susceptible to moral distress as they potentially hold higher moral standards (García et al., 2017; Kubitza et al., 2022). Those who practice positive religious coping look for strength from the divine and aim to understand how their adversity may be used for potential growth and resilience from such experiences (Maturlu, 2025). Conversely, those who employ negative religious coping, which is characterized by spiritual discontent, see adversities as a sign of divine judgment or abandonment, exacerbating feelings of helplessness and hopelessness. Positive coping can

strengthen the connection between spirituality and resilience in high-stress situations, while negative coping can intensify stress and undermine well-being (D'Alessandro-Lowe et al., 2023; Maturlu, 2025). As such, spiritual perspectives and how one views God, either through a love and forgiveness perspective or a judging and punishing perspective, should be considered.

From a love and forgiveness perspective, those who practice faith-based or spiritual coping report feeling grounded. While working in potentially trauma-causing situations, they feel calm and reassured, with their faith providing stability and order in unpredictable environments (Ozcan et al., 2021). For some, spiritual coping can facilitate an acceptance of circumstances beyond their control, fostering the ability to withstand secondary trauma and bounce back from difficult experiences, strengthening a sense of self, and providing an identity beyond their professional role and a sense of belonging, both to a higher power and to communities. A key to spiritual coping is developing meaningful relationships with others who share the same strong foundation in a personal relationship with a divine being, finding both support and shared meaning in these connections (Jerome et al., 2023). Adopting such empowering beliefs and religious practices with coping strategies, including trust in a divine authority over life, helps shift perspectives and foster adaptive coping. This belief system allows individuals to reframe adversity as part of a divine plan, reducing anxiety and enabling them to find new meaning in difficult experiences. Integrating spiritual coping can help individuals recognize interdependence and build supportive relationships through shared narratives (Scoles, 2020). It can also help them shift from a blame to an acceptance mindset, find meaning in events and experiences, and transform, constructing new realities.

**Transformational Learning and Posttraumatic Growth (PTG)**

Although much of the literature on paramedic response to stress is viewed through a trauma perspective and bouncing back from the effects of stress, there is an underlying theme of change and constructing new realities. Potentially trauma-causing events can result in distress, depending on resilience, coping strategies, and social support; however, these new realities can lead to PTG (Abdo & Schlösser, 2024; Coyte et al., 2023). PTG is positive stress-related growth resulting in beneficial changes that occur after an individual has been exposed to a perceived stressful experience (Puticiu et al., 2024; Tedeschi et al., 2018; Tedeschi & Calhoun, 2004, 2014). Many paramedics describe profound shifts in how they perceive themselves and the world due to their work (Eschenbacher, 2023) and report growth in areas such as appreciation of life, personal strength, and changes in self-perception (Coyte et al., 2023). Eschenbacher and Fleming (2022) link stress responses that lead to PTG to transformational learning theory (Mezirow, 1991), suggesting that the potentially trauma-causing experiences paramedics endure are what Mezirow (1991) describes as 'disorienting dilemmas', the triggering events that lead to transformational learning, indicating that such experiences can reshape personal identities and relationships (Eschenbacher, 2023). Although this concept focuses on potentially trauma-causing events, it is the perspective of the individual that determines what is potentially traumatic, or what is a disorienting dilemma. It is not the severity of paramedic experience that leads to distress or growth, but the perspective of the paramedic.

It has also been reasoned that the direction of response is influenced by the individual's perspective. It has been observed that most paramedics experience PTG as an outcome of their experiences (Puticiu et al., 2024). This highlights that positive personal development can emerge from challenging circumstances. PTG is more than just bouncing back after hardship. It is the emergence of positive psychological change that grows out of the struggle itself (Tedeschi et al.,

2018; Tedeschi & Calhoun, 2004, 2014). Unlike coping or recovery, PTG suggests that individuals can reach a level of functioning that surpasses where they were before their potentially trauma-causing experience. The idea isn't new. Philosophers and spiritual traditions have long suggested that growth can follow suffering, but the language around PTG helps us articulate that transformation in modern psychological terms. What's compelling about PTG is its paradox: strength forged in vulnerability, deeper faith after spiritual doubt, or a clearer sense of purpose after chaos. Potentially trauma-causing events or experiences often damage the foundational assumptions people hold about their world. This disruption forces re-evaluation, often beginning with intrusive, automatic thoughts (rumination). In PTG, over time, these evolve into more deliberate, reflective processes (Tedeschi et al., 2017), what Tedeschi and Calhoun (2004) describe as cognitive restructuring, or Mezirow (1991) calls transformational learning, where people work to make sense of their experience and rebuild a more resilient worldview, a type of learning that goes beyond traditional learning (Eschenbacher & Fleming, 2022). However, this learning is not passive and requires more than just coping.

The emotional landscape during this time is critical. Managing distress is not about suppressing it but making space for the kind of processing required: deliberate rumination or critical reflection on core beliefs, which fosters growth (Lindstrom et al., 2013; Mezirow, 1991, 2012; Tedeschi & Calhoun, 2004, 2014). This type of processing aligns with the approach-style of coping described by Arble and Arnetz (2017), but the process is not so straightforward. A complex relationship exists where avoidant coping is also associated with a moderate increase in PTG. This suggests that periods of avoidance following potentially trauma-causing experiences allow for the time necessary for processing the event, giving the space required for growth to occur (Arble & Arnetz, 2017; Wolff, 2020). This perspective suggests that approach- and

avoidance-style coping occur concurrently, allowing the first responder to reconnect to their emotions after disconnecting while enduring the potentially trauma-causing event (Stelnicki et al., 2021) and to put the pieces of the puzzle together to foster the meaning-making process (Wolff, 2020). This process allows the individual to reconcile the event with their narrative identity and belief systems.

Putting the pieces together in a way that fosters growth involves the integration of several additional coping strategies. Being able to talk openly about one's experience can help individuals shape new meaning and re-author their narrative a way that makes room for what has changed (Tedeschi & Calhoun, 2004). Growth is strengthened when combined with "active coping, planning, turning to religion, seeking emotional and instrumental support, and self-distraction" (Ogińska-Bulik & Zadworna-Cieślak, 2018, p. 41). Although resilience itself is weakly associated with overall PTG (Ogińska-Bulik & Zadworna-Cieślak, 2018), and the relationship between the two is ambiguous (Ogińska-Bulik & Kobylarczyk, 2015), individuals with higher levels of determination and persistence have a higher probability of experiencing growth in how they see themselves and in their relationships, with a stronger connection to changes in self-perception, functioning more as a protective buffer against adverse outcomes than as a direct driver of growth (Ogińska-Bulik & Zadworna-Cieślak, 2018). Interestingly, coping approaches involving emotional regulation, spiritual coping, and avoidance, especially self-distraction, appear to play a more significant direct role in fostering PTG than traditionally emphasized problem-focused strategies. Active coping contributes to PTG, although its influence was more modest and seemed to be amplified by the individual’s level of resilience. Ultimately, those who are able to navigate potentially trauma-causing events effectively often do so by drawing on emotion-focused strategies that allow them to find meaning, especially in how they

view themselves and the life they are living, tying growth with acceptance and self-efficacy as suggested by Kucmin et al. (2018) and Rojas et al. (2022) discussed above. Meaning-making is complex, involving many components, but it appears to be a natural one.

This sort of meaning-making that leads to growth appears to have a distinct pattern. PTG is a recursive cycle of psychological and behavioral changes enabled by various forms of support (Maitlis, 2020). Aligning with Tedeschi et al. (2018) and Tedeschi and Calhoun (2004, 2014), the process begins with a potentially trauma-causing experience that significantly disrupts an individual's core beliefs. Such events can disrupt an individual's sense of predictability, knowability, and control over their world, leading to fear and confusion. Immediately following, individuals often experience difficult-to-control emotions and may even suffer from intrusive memories and thoughts, which are the brain's involuntary attempts to integrate the traumatic event into existing schemas. To progress towards growth, individuals must manage their distress and regulate their emotions through the use of different coping strategies, to move towards making meaning, making sense of the potentially trauma-causing experiences. Through this process, individuals construct narratives of positive transformation, often developed and enriched through conversations with others (Maitlis, 2020). Each of these steps also aligns with Mezirow's (1991) transformational learning theory, which requires critical reflection. Ultimately, the paramedic role prompts self-reflection, but it is from an informed choice to confront the challenges of the job, requiring both planning and emotion-focused coping strategies, as transformation is not immediate, to not just be resilient but also grow and transform (Eschenbacher, 2023). Growth is described as a gradual maturation rooted in repeated exposure to chaos. The process is not static. It is an active approach that combines many strategies.

The positive coping with the uncertainty and adversity experienced daily fosters resilience and strength, but also encourages a more critical perspective or worldview, indicating how occupational identity intersects with coping. However, growth is not without cost (Ogińska-Bulik & Kobylarczyk, 2015). PTG doesn't cancel out pain (Tedeschi & Calhoun, 2004). It can coexist with ongoing distress. But it does point to the possibility of finding something meaningful in the aftermath. Importantly, research shows PTG and psychological distress are not opposites. A person can grow while still hurting. They are separate dimensions, and while growth may ease suffering for some, the growth itself doesn't depend on the pain disappearing. While some paramedics describe emotional growth, others relay emotional numbing, even a loss of empathy, as a survival strategy (Eschenbacher, 2023). For some, transformative learning meant having to reconnect with emotions they had suppressed for the sake of functionality, to relearn how to feel again. The same experiences that build resilience can also erode empathy. Ultimately, these reflections call attention to the ambivalent nature of professional transformation.

## Summary

This literature review explores the complex relationship between paramedic work, trauma, resilience, and worldviews. Although paramedic work involves occupational risks and frequent exposure to potentially trauma-causing events that may affect some paramedics' well-being, it is unclear what paramedics are experiencing. There are many definitional challenges concerning trauma, little consensus on trauma conceptual frameworks and the types of stress paramedics experience, and MI may be a confounding factor. Resilience is explored beyond simply bouncing back and how it is influenced by personal traits, coping strategies, and external factors. The research offers mixed support on how personality traits influence resilience, and the

benefits of coping strategies are sometimes overstated. Other factors, such as social and peer support and spirituality, were examined, but the effectiveness of each is not seen as consistent in the literature. Narrative Identity may be a key in influencing self-perception and mental well-being, but the evidence does not clearly indicate its influence on resilience. A transformational learning lens may provide insight into how paramedics write their stories in a way that leads to PTG that goes beyond merely bouncing back.

In summary, there is little consensus on what trauma is, what framework of trauma paramedics suffer from, and how many paramedics suffer from the ill effects of occupational trauma. Popular perceptions suggest that all paramedics will experience adverse stress reactions as a result of their role. A contradictory conclusion from the literature is that most paramedics do not suffer ill effects because of their paramedic role, and many may even experience PTG as a result. However, most of the available research focuses on the minority who suffer, and there is very little research into why most do not, leading to the central research question: What are the experiences of paramedics who have maintained positive psychological well-being despite the emotional and psychological demands of their work—how do they remain anchored as they navigate the shifting tides?

There is a clear gap in the literature regarding how preventative resilience functions within the lived experience of paramedics. Further research is required to answer the following questions. How do paramedics describe their narrative identity and what it means to be a paramedic? How do paramedics describe the distressing experiences they face, and the ways they navigate challenges in their work? How do paramedics describe the ways in which connection, spirituality, values, and moral frameworks shape their lived experiences? And how do paramedics describe experiences of transformation and growth?

# Chapter Three: Methods

## Overview

The purpose of this hermeneutic phenomenological study will be to explore how most paramedics maintain positive psychological well-being despite their emotionally and psychologically demanding work. The central question is: What are the experiences of paramedics who have maintained positive psychological well-being despite the emotional and psychological demands of their work—how do they remain anchored as they navigate the shifting tides? There is a clear gap in the literature regarding how preventative resilience functions within the lived experience of paramedics. A review of the literature on first responder stress and trauma-related mental illness reveals a strong focus on a single dimension of resilience, the ability to bounce back from adversity, and not from the preventative or protective perspective. Furthermore, very little of this research specifically focuses on paramedics. A paramedic's narrative identity, spirituality, social community, or worldview may play a powerful role in fostering preventative resilience or even growth. Understanding these factors could shape hiring practices, guide training, and support more effective mental wellness strategies. This chapter provides an overview of the study's design and details why a hermeneutic phenomenological qualitative method is the best approach. It details who the participants are and the setting, and outlines the procedures that will be followed, from data collection to analysis. My role as the researcher is described, and trustworthiness and ethical considerations are reviewed.

## Design

Quantitative research in the paramedic occupational stress domain demonstrates high rates of posttraumatic stress symptoms and mental illness (Betts, Stoneley, Anderson, et al.,

2024; Carleton et al., 2019), but quantitative research does not explain why there are high rates, nor does it explain why it does not affect all paramedics. The current study will use a qualitative method as exploring lived experiences can yield insights that cannot be revealed in statistical analysis (Creswell & Poth, 2018). It is through lived experiences that meaning-making occurs. Qualitative inquiry focuses on delving into contextual meaning using the human 'instrument' for data collection in a way that is attuned to deeper meaning when interpreting data (Merriam & Tisdell, 2016). A hermeneutic process can provide insight into this meaning-making process.

Many paramedic experiences conflict with their core beliefs, which can either lead to distress or growth, suggesting there is an interplay of meaning-making that is occurring. This meaning is implicated in the paramedic's 'prereflective reflection' (van Manen, 2014). Insights can be revealed through a sense of 'wonder', questioning, and interpreting lived meaning in paramedic stories, better than through the use of analytic concepts, theoretical abstractions, and scientific methods. Many paramedics have not reflected on their experiences, yet those same experiences have written their narrative stories.

This study adopts a hermeneutic phenomenological approach to explore how paramedics remain anchored in the shifting tides of their emotionally and psychologically taxing work. Specifically, it draws on the work of van Manen (1997, 2014, 2017), whose approach to phenomenology focuses on deep, interpretive reflection to uncover the meanings embedded in lived experiences, a method of making sense of the paramedic experience (Merriam & Tisdell, 2016). Hermeneutic phenomenology is particularly suited for this study as it acknowledges the interpretive nature of human experience and highlights the complexity of memory, emotion, embodiment, and meaning-making. It reveals lived experience (Creswell & Poth, 2018), what it is like to be a paramedic. The stories paramedics construct about their realities; about their

experiences, can reveal the underlying meanings and how their role has molded who they are and how they interact with the world, aligning with the underlying frameworks of narrative identity (McAdams & McLean, 2013; McAdams & Pals, 2006), transformational learning (Mezirow, 1991, 2012), and posttraumatic growth (Tedeschi et al., 2018; Tedeschi & Calhoun, 1996, 2004).

The primary aim of this research is to explore how paramedics construct their experiences of resilience in the field and how their experiences foster posttraumatic growth, with a focus on narrative identity, spiritual beliefs, worldview frameworks, and the influence of community and social support. Hermeneutic phenomenology is not just about the description of experience; it is also about the researcher's interpretation of the lived experience (Creswell & Poth, 2018). Hermeneutic phenomenology begins with a sense of reflective wonder about experience, through deep questioning, progressing to interpretation (van Manen, 2017). Phenomenological questions designed to relate experience can illuminate what fosters paramedic resiliency. The questions do not ask for specific answers; they ask for experience in a 'non-methodological' way, to hear the stories and search for meaning. This phenomenological design fits the purpose of the study as constructivism and interpretivism both align with the epistemological foundations of qualitative research and the phenomenological approach (Merriam & Tisdell, 2016). Consistent with van Manen's (1997, 2014, 2017) methodology, the intent is not to test hypotheses or measure variables, but to illuminate the meaning and essence of experiences as lived by the participants.

The research questions were crafted to invite participants into narrative accounts of specific experiences. They are intentionally open and experience-oriented, consistent with van Manen’s (1997, 2014, 2017) hermeneutic phenomenology. Rather than seeking specific answers or evaluative judgments, they invite participants into deep, storied pre-reflective accounts. This

approach attends to the moral, emotional, spiritual, and existential dimensions of paramedic resilience, with attention to how these experiences shape, and are shaped by, narrative identity, spirituality, social community, worldview, transformational learning, and posttraumatic growth. The questions are designed to allow the emergence of broader, layered understandings of lived experience, rather than narrow explanations tied to isolated events (Creswell & Poth, 2018; Merriam & Tisdell, 2016). The central research question that drives this study is: What are the experiences of paramedics who have maintained positive psychological well-being despite the emotional and psychological demands of their work—how do they remain anchored as they navigate the shifting tides? The research sub-questions focus on the different components of the tackle required for an anchor to hold fast that may be revealed in their pre-reflective narrative stories.

## Central Research Question

What are the experiences of paramedics who have maintained positive psychological well-being despite the emotional and psychological demands of their work?

## Research Sub-Questions

1. How do paramedics describe their narrative identity and what it means to be a paramedic?
2. How do paramedics describe the distressing experiences they face, and the ways they navigate challenges in their work?
3. How do paramedics describe the ways in which connection, spirituality, values, and moral frameworks shape their lived experiences?
4. How do paramedics describe experiences of transformation and growth?

## Participants

Participants will be recruited through purposeful convenience sampling (Palinkas et al., 2015). Recruitment is purposeful as the central research question dictates the inclusion criteria rationale for choosing participants (Merriam & Tisdell, 2016). The participants must be paramedics who have not experienced any negative effects (for example, time away from work, or therapy was required, to recover from situations related to their role as a paramedic), or only experienced short-term temporary negative effects (for example, their distress resolved quickly through use of coping strategies that may have included peer, social, or spiritual support), or may have even experienced personal growth, as a result of their role as a paramedic. Participants must also have had enough time on the job to experience sufficient potentially trauma-causing events to demonstrate their resiliency. The difficulty is determining the appropriate amount of work experience. As the literature does not provide any data regarding the correlation of reactions to potentially trauma-causing events and length of service, the minimum number of years of experience for this study will be five years. This decision is supported by literature suggesting that constant exposure to potentially trauma-causing events increases risk (Thomas, 2023; Wagner et al., 2020), and higher frequency and intensity of the potentially trauma-causing events can intensify the risk of mental illness (Hoell et al., 2023; Wagner et al., 2020). Additionally, the cumulative effect of exposures over time predicts negative outcomes, suggesting risk increases with years (Bonumwezi et al., 2022; Rowe et al., 2022). Furthermore, an industry standard in some jurisdictions suggests that paramedics with less than two years' experience are considered 'interns' (Crowther et al., 2024) or 'newly qualified' (Copson et al., 2024), and therefore may not have had sufficient time or call volumes for the cumulative effect as described.

Although convenience sampling can potentially limit the width or breadth of the sample and may even introduce bias, access to participants is readily available (Doebel & Frank, 2024). To widen the breadth, paramedic-related social media groups will be leveraged in recruitment, and snowball sampling, where participants recommend other participants, will be used to expand a broader reach. Factors such as age, gender, or race will not be used as criteria for inclusion or exclusion as participants; however, an individual's social identity can moderate or mediate stress reactions or even act as a protective factor (Muldoon et al., 2019); therefore, including diverse participants could reveal additional themes and contribute to more robust, nuanced findings.

The projected number of participants will be between five and 25 (pseudonyms will be used for all participants to protect their privacy), consistent with recommendations for phenomenological research aimed at deeply exploring lived experience (Creswell & Poth, 2018). The final size of the sample will be determined by data saturation, when participants begin to offer similar responses to the research questions, and no new themes are identified, at which point data collection will cease (Merriam & Tisdell, 2016). This methodology will require simultaneous analysis and data collection.

## Setting

The study setting is within countries that are part of Western society. Due to purposeful convenience sampling, the core setting will be Northern Ontario, Canada, however, to maximize variation and diversity (Doebel & Frank, 2024; Palinkas et al., 2015), additional recruitment strategies aim to broaden participation across North America and potentially to other continents. The paramedic role is comparable in all jurisdictions, with practitioners facing similar potentially trauma-causing events. A wide geographic reach, including multiple countries and continents will help mitigate selection bias (Doebel & Frank, 2024; Palinkas et al., 2015). Furthermore,

cultural differences that exist in diverse geographic locations may offer insights into how culturally influenced spiritual belief systems (Dolcos et al., 2021; García et al., 2017; Ozcan et al., 2021) and social supports (Lockhart & Perrott, 2024; Saheem et al., 2024; Vig et al., 2020) shape paramedic resilience and worldviews.

## Procedures

Upon successful proposal defense, an application to the Institutional Review Board (IRB) will be made for approval before recruiting participants. The application will include the research proposal, permission request letters, recruitment materials such as advertisements, scripts, and follow-ups, consent forms, and an interview guide. Prior to submission to the IRB, the interview guide will be reviewed with a professional peer to assess for potential bias that I may have introduced due to being an insider (Creswell & Poth, 2018). Once IRB approval has been received, the interview guide will be piloted with a small sample outside the study sample for clarity. Once complete, participant recruitment of paramedics who meet the inclusion criteria can begin.

First, personal email invitations will be extended to paramedics known to me through industry networks, but with whom I have no professional, personal, or social relationship that could introduce bias. Second, requests to circulate recruitment flyers that outline the purpose of the study, the inclusion criteria, and how to participate to paramedics at specific paramedic services will be made to paramedic service representatives known to me through professional circles. Third, the recruitment flyers will be distributed via paramedic social media groups of which I am a member. Fourth, my personal public-facing portfolio website will display the recruitment flyer and a hyperlink to a secure Liberty University Microsoft Office 365 form where participants can submit their demographic information, self-identify that they meet the

criteria, read the consent information in full, and indicate consent by checking a box affirming that they have read, understood, and voluntarily agree to participate.

One-to-one interviews will be scheduled with each participant to occur using Zoom virtual meeting software. The consent forms will be reviewed with each participant prior to the interview beginning. To reduce any potential risk, all participants will receive information that includes a quick reference mental health guide on stress responses, and the process of ending the interview immediately if the participant becomes distressed will be discussed. The participants will be encouraged to ask questions, reminding them that participation is voluntary, and they can withdraw at any time. The interview will last approximately 90 minutes.

Data will be collected using a semi-structured interview guide consisting of 17 questions (Merriam & Tisdell, 2016; van Manen, 2014). The Zoom virtual meeting software's transcription feature will be used to transcribe the interviews. Recordings and transcripts of the interviews will be downloaded from the server to my password-protected computer, and the server copies will subsequently be deleted. Participants will also be invited to submit a written narrative describing their life experiences that influenced their decision to pursue a career in paramedicine. Continuous data analysis will occur alongside data collection. Transcript and narrative excerpts will be reviewed with each participant during follow-up interviews to ensure that their experiences have been accurately represented (van Manen, 2014). This process invites participants to clarify or elaborate on their accounts, potentially offering additional insight into their lived experiences (Merriam & Tisdell, 2016). Participants will also be encouraged to bring and describe artifacts that hold personal or symbolic meaning related to their experiences serving as a secondary source of data collection. All recordings will be deleted once the transcripts are anonymized and the member validation process has been completed.

Data analysis will be conducted by reading and rereading the transcripts and memoing the identified meaning units (Creswell & Poth, 2018). The process of horizontalization of the meaning units will be applied (Merriam & Tisdell, 2016), and they will be grouped into meaning themes (Creswell & Poth, 2018). Following the analysis, the experiences of the participants will be described according to the emergent themes (Creswell & Poth, 2018), and imaginative variation will be used to deepen the interpretive process (Moustakas, 1994). This process will be repeated for each participant, and a composite textural-structural description will be constructed, describing the sense of meaning created by the participants (van Manen, 1997). The textural-structural description will reveal what it is like to be a paramedic.

## The Researcher's Role

The core of qualitative research is human experience. Axiological assumptions acknowledge that human experience is shaped by values, beliefs, and meaning-making (Creswell & Poth, 2018). The assumptions also acknowledge that the researcher is not a neutral observer, but a co-constructor of meaning. The researcher's background influences how they interpret data, and they must acknowledge how their own experiences influence the research process. As such, the values of both the participants and the researcher inevitably influence the research process. Given that I am a paramedic, I bring personal narratives of the same types of experiences that participants in this study may describe. While this insider perspective can enhance depth of understanding, it also carries the risk of researcher bias (Dwyer & Buckle, 2009). To reduce potential bias, it must be identified and monitored (Merriam & Tisdell, 2016). Practices such as bracketing, reflective journaling, and mindfulness-based reflection will be used to become more aware of preconceptions and remain as faithful as possible to the underlying meanings interpreted from the paramedic narratives (van Manen, 2017). This strategy, known as 'epoché',

where presuppositions are set aside (van Manen, 2014), will enable a more faithful interpretation of the participants' experience.

## Data Collection

Data collection will use four components: interviews, narrative writing, artifact/document analysis, and follow-up interviews. In all four, the researcher plays a critical role in data collection, being the 'instrument' used for collection (Dwyer & Buckle, 2009; Merriam & Tisdell, 2016). Interviews are usually the primary method for data collection in qualitative studies (Creswell & Poth, 2018). Secondary data sources can be used to validate the data through comparison (Creswell & Poth, 2018). Additional techniques, such as narrative writing, artifact/document analysis, and follow-up interviews, provide rigor and strengthen the data through triangulation.

### Interviews

The main data collection method will be interviewing. Interviewing is a structured conversation to enter the other person's perspective (Merriam & Tisdell, 2016). Gathering meaningful data depends on carefully crafted questions and follow-up probing prompts that encourage deep reflection. Semi-structured interviews using 17 open-ended questions that are formed to elicit non-reflective narratives of experience will be used. The guiding interview questions were crafted to invite participants into deep, narrative accounts of specific experiences as lived, rather than abstract explanations or evaluative summaries. The interview guide is designed to elicit paramedic narratives that attend to the moral, emotional, spiritual, and existential dimensions of paramedic resilience, with special attention to how such experiences shape or are shaped by narrative identity, spirituality, worldview, transformational learning, and posttraumatic growth. This interviewing style becomes a conversation, telling stories of

experiences in a pre-reflective way to understand 'what the experience was like' (van Manen, 1997, 2014, 2017).

Interviews will be conducted using Zoom, an online virtual meeting software that utilizes recording and transcription features and will last approximately 90 minutes. Data will be downloaded and deleted from the software server, anonymized, and stored on a personal computer secured with a password. The interview guiding questions are detailed below.

1. Please introduce yourself. If we are acquaintances, please do so as if we had just met.
2. Please describe a moment when you felt most like a paramedic.
3. Please walk me through a shift that felt like a typical or ordinary day.
4. Think of a moment that changed the way you think about your work or about yourself as a paramedic. Please describe that event in detail.
5. Think of an experience when something at work made you feel frustrated. Please describe that event in detail.
6. Think of an experience when something at work made you feel uncertain or shaken. Please describe that event in detail.
7. Think of a job-related experience that would be considered a critical stressor for most paramedics, perhaps your first one. Please describe that event in detail.
8. Now think of a more recent experience that felt similarly intense. Please describe that event in detail.
9. Think of an experience that shows what it means to get through the hardest parts of this job. Please describe that event in detail.
10. Think of an experience when your personal values or spiritual beliefs helped you get through a difficult situation on the job. Please describe that event in detail.

11. Think of an experience at work when something felt morally or spiritually significant, or deeply meaningful, like something was clearly right or wrong. Please describe that event in detail.
12. Think of a situation at work where support from others helped you in a meaningful way. Please describe that event in detail.
13. Think of a time when you truly felt part of a community at work or outside of work, or especially connected to others. Please describe that event in detail.
14. Think of a work-related event that led to personal or relationship changes. Please describe that event in detail and how that change showed up later.
15. Think of a time when something you believed about your role was challenged. Please describe that event in detail.
16. Think of a specific job-related experience that was painful or difficult, but later felt like it changed you in some way. Please describe that event in detail.
17. Think about a job-related experience that led you to discover something new about yourself, your purpose, or what you value in life or work. Please describe that event in detail.

Interview questions one through four are associated with research question one, "How do paramedics describe their narrative identity and what it means to be a paramedic?" Question one is an introduction to help develop rapport with the study participant and gain their trust and confidence, and to provide a level of comfort (Merriam & Tisdell, 2016). It also situates themselves in relation to others. Questions two and three are about lived meaning, what it is like to be a paramedic (van Manen, 2014), and understanding it from their perspective (Creswell & Poth, 2018). Question two expands on the paramedic's sense of self and provides insight into the

paramedics' role identity and the potential interplay with experiences that can cause distress (Mausz et al., 2021). Question three expounds on lived time and space, the rhythm and flow of their work. Question four encourages stories about lived meaning and the transformation of self over time, and how their narrative changes.

Interview questions five to nine are associated with research question two, "How do paramedics describe the distressing experiences they face, and the ways they navigate challenges in their work?" focusing on navigating challenges. There are many terms and inconsistent definitions of trauma that vary from adversity to life-threatening events (Krupnik, 2019; Loewenthal et al., 2022). Overall, these questions will provide further insight into the conceptual framework of the type of trauma they experience: posttraumatic stress, secondary trauma, vicarious trauma, burnout, or compassion fatigue (Rauvola et al., 2019; Renkiewicz & Hubble, 2023). Questions five to seven will reveal the lived body experience of the paramedic, including emotional and physical reactions, and disruption of confidence. Question eight will provide insight into the paramedic's lived time, comparing past and present events, and question nine will provide insight into the paramedic's lived meaning, their resilience, and endurance.

Interview questions 10 to 14 are associated with research question three, "How do paramedics describe the ways in which connection, spirituality, values, and moral frameworks shape their lived experiences?" focusing on social connection, spirituality, values, and moral frameworks. Questions 10 and 11 will reveal the paramedic's lived meaning and the core of their worldview. Their spirituality: moral compass, ethical clarity, depth of purpose, and existential reflection. Spirituality plays a key role in coping and resiliency (Dolcos et al., 2021) and has been found to provide strength and the ability to withstand perceived stressors (Diego-Cordero et al., 2022). The paramedic narratives will reveal insight into this complex, understudied

phenomenon of this relationship. Questions 12 to 14 will provide insight into the paramedic's lived relation; their interdependence and shared humanity, belongingness, and social identity, as well as their evolving relationships. Social and peer support are linked to enhanced psychological health and reduced distress, are protective in nature, and are a core component of an individual's psychological makeup (Lockhart & Perrott, 2024). The paramedic stories will provide further insight into how connections with peers and others served as a protective factor.

Interview questions 15 to 17 are associated with research question four, "How do paramedics describe experiences of transformation and growth?" focusing on transformation and growth. Puticiu et al. (2024) observe that most paramedics experience PTG as an outcome of their role. Paramedics describe profound shifts in how they perceive themselves and the world due to their work (Eschenbacher, 2023). Such shifts resulting from potentially trauma-causing events have been likened to Mezirow's (1991) 'disorienting dilemma', which is a precursor to transformational learning and potential growth or positive personal development from potentially trauma-causing events (Tedeschi & Calhoun, 2004, 2014). The questions will provide insight into the lived meaning related to the paramedics' re-evaluation of assumptions and identity, how events are reframed, and the discovery of purpose and values.

In summary, the questions are not designed to gather answers, but are designed to elicit paramedic narratives that attend to the moral, emotional, spiritual, and existential dimensions of paramedic strength, with special attention to how such experiences shape or are shaped by narrative identity, spirituality, worldview, transformational learning, and posttraumatic growth. The questions are designed so the paramedics will tell stories of experiences in a pre-reflective way to understand 'what the experience was like' (van Manen, 1997, 2014, 2017), which can then

be interrogated (Garza, 2007), and context identified (Creswell & Poth, 2018), answering each of the study's research questions.

**Written Narrative**

Upon completion of the first interview, participants will be invited to write a short narrative describing the life experiences that influenced their decision to pursue a career in paramedicine and to submit it by email prior to the follow-up interview. Exploring the experiences that shaped their vocational choice, the examples found in their narratives (van Mannen, 2017), may provide further insight into their worldviews and contribute to understanding the foundations of their resilience.

**Artifact Analysis**

Personal artifacts or documents such as diaries, letters, poems, artwork, and personal blogs are expressions of meaning-making and can help tell the stories of their experience (Merriam & Tisdell, 2016). Participants will be asked to provide artifacts and artistic expressions of their experiences, such as diaries, letters, poems, artwork, or personal blogs, and describe the stories associated with each artifact in either interview, to add to their narratives of their lived experiences. The artifacts can be interrogated to disclose intentional relations between data and what is asked about to reveal meaning while remaining mindful of my interpretive frame of reference (Garza, 2007). The data can be put into categories, coded, added to, and constantly compared with the developing themes. (Merriam & Tisdell, 2016). Although the observational data are not reliable accounts of the experience, as they are self-selected by the individual and therefore may be biased, they are a reconstruction of a part of the experience and reflect the perspectives of the participants. Questions to interrogate the data include: What information does

the data provide in relation to the experience (objective viewpoint), and how does the participant describe what the data says (subjective viewpoint)?

### Follow-up Interviews

Follow-up interviews can be an additional method for triangulation of data. Transcript and narrative excerpts will be reviewed with each participant during follow-up interviews to ensure that their experiences have been accurately represented (van Manen, 2014). This process invites participants to clarify or elaborate on their accounts, potentially offering additional insight into their lived experiences (Merriam & Tisdell, 2016). This will require continuous data analysis concurrently with data collection.

## Data Analysis

Data analysis will follow a structured process of phenomenological reduction to identify and interpret the essence of lived experiences (Creswell & Poth, 2018; Moustakas, 1994; van Manen, 1997). For each participant, I will begin by reading and rereading the transcript, engaging in an iterative cycle of looking and describing, then looking and describing again. Through this process, I will highlight important experiential statements and begin memoing ideas, thoughts, and key concepts, asking what, why, when, how, and who (Creswell & Poth, 2018), and identify the relationship to body, space, time, and physical things (van Manen, 1997) as a way of making sense of meaning. This requires a balance, considering the parts and the whole, moving between moments and meaning to capture both depth and coherence. Memos will be recorded alongside the data (Creswell & Poth, 2018), either as digital comments in transcripts or organized digitally using software such as Liquid Text. This helps maintain engagement with the data and fosters reflection during each reading. Every memo will be dated and time-stamped to build a clear audit trail and track the evolution of insights over time.

Following this reduction process, I will engage in horizontalization, where all significant statements are treated with equal value (Merriam & Tisdell, 2016). Intellectus Qualitative, a cloud-based application to aid in coding and theme development, will be used. Through coding, the memos will be grouped into meaning themes (Creswell & Poth, 2018). These themes represent patterns or clusters of related meanings that, through reflection, begin to illuminate the core of the participants' experiences (van Manen, 1997). Organizing these themes into families where overarching parent themes contain child subthemes helps refine and narrow the data toward a distilled narrative essence (Creswell & Poth, 2018).

Next, I will begin to describe the experiences of participants according to the emergent themes, incorporating direct quotes and examples to support interpretation (Creswell & Poth, 2018). Each theme will be explored in terms of its structure and essence. I will also engage in imaginative variation, where I will describe my own related experiences, constructing a textural description, and subsequently interrogating the data to deepen the interpretive process (Moustakas, 1994).

This process will be repeated for each participant (Moustakas, 1994). Once individual analyses are complete, I will construct a composite textural-structural description. This involves synthesizing the meaning units across all participants' experiences into overarching themes that represent a universal description of the experience. This final step is a reflective process that brings coherence to the data, revealing the shared meanings and deeper essence of the phenomenon under study.

## Trustworthiness

Trustworthiness of qualitative research is a much-debated concept (Merriam & Tisdell, 2016). Many challenge the concept of qualitative research trustworthiness, citing weaknesses

such as the researcher as the primary instrument, researcher bias, and transferability. Consequently, qualitative researchers will espouse the value of qualitative researchers' credibility, which focuses on congruence with accuracy and reality (the researcher as the investigative instrument), dependability and confirmability, which focus on how the study is conducted, the degree to which it can be reproduced, and the level of confidence in the methods used, and transferability. How each is addressed in this study is outlined below.

**Credibility**

Credibility (internal validity), in hermeneutic phenomenology, is found in the insights and the interpretive processes used in the study (van Manen, 2014). This begins with the interview questions, ensuring they ask, "What is the experience like?" or "How is it experienced?", in place of participant opinions and their view of the world (Merriam & Tisdell, 2016). Secondly, the data analysis is only conducted on descriptive accounts and avoids participant opinions, beliefs, and interpretations. Thirdly, validation criteria commonly used in other methodologies are not used. And finally, thick and rich descriptions of the data will be used, quoting participant examples alongside researcher interpretations.

To augment credibility, member checks are often used to receive feedback on preliminary findings to ensure meanings are not misinterpreted (Merriam & Tisdell, 2016). In hermeneutic phenomenology, member checks are used to ensure examples taken from participant accounts are accurate (van Manen, 2014). Member checks will be conducted to ensure accuracy, and additional information that may not have already been captured can be offered (Moustakas, 1994). Additionally, researcher memoing will be used to create an audit trail of thinking processes and tracking of the development of ideas and a detailed account of how the research was conducted (Creswell & Poth, 2018; Merriam & Tisdell, 2016).

**Dependability and Confirmability**

Dependability and confirmability (reliability) are based on the level of confidence in how the study was conducted and its results, as human behavior is fluid and not static (Merriam & Tisdell, 2016). Thus, careful attention is paid to how the data is collected and analyzed, the method of interpretation and potential influences, and how the researcher presents the information.

In hermeneutic phenomenological research, reliability must account for the idea that all understanding or knowledge presupposes prior understanding or knowledge (van Manen, 2014). As such, researcher bias is not ignored but acknowledged. To help surface uncritically examined assumptions and prejudices, I will use 'epoché' bracketing, where presuppositions are set aside to bracket my experience and associated meaning-making as much as possible to allow the stories of the participants to be heard, and foster a pre-reflective analysis of the data (Moustakas, 1994). In line with Creswell and Poth (2018), I will also make my own positionality known by reflexively writing a narrative account of my personal experience of the phenomenon. This reflexive process is not a detour from the study but a necessary part so that the reader can understand the lens through which the participant accounts were viewed (Merriam & Tisdell, 2016). The interview guide will further support this approach by ensuring the questions remain grounded in the lived experience of participants.

The findings will be depicted in a logical way that will make sense to the reader (Merriam & Tisdell, 2016). Clear and accurate examples of participant accounts will be included with the researcher's interpretation of the data, so that the reader can follow the thought process and see the path from account to interpretation.

### Transferability

Transferability is related to how generalizable the study is, but not in the same replicable sense in quantitative research, but rather whether the results can be transferred to other contexts (Creswell & Poth, 2018). In hermeneutic phenomenological research, quantitative generalization is impossible (van Manen, 2014). However, in the existential sense, it is possible to recognize recurrent meanings emerging from participants' narratives in other contexts (external validity). Stories of stress and trauma in paramedics is a good example of where the findings are transferable to other PSP, as many researchers will group paramedics into the same PSP category with police, firefighters, corrections officers, emergency dispatchers, and border patrol officers (Anderson & Carleton, 2022; Lentz et al., 2021; Ricciardelli et al., 2020; Smith-MacDonald et al., 2021). By using thick, rich, and interconnected accurate descriptions that detail the participants' narratives and researcher interpretations, the reader can easily transfer the information to other PSP contexts, as many of the characteristics are shared.

## Ethical Considerations

Through the recruitment process, participants who have experienced posttraumatic-like symptoms, stress injuries, decreased mental well-being, or mental distress/illness, because of their paramedic role, are excluded from the study. While this study only includes participants who self-identify as mentally well and have not reported any adverse effects caused by their paramedic role, there remains a small risk that revisiting their experiences during the interview process could trigger delayed stress reactions. However, this risk is considered minimal as participants who meet the criteria are presumed to demonstrate resilience (Piotrowski et al., 2021), practice positive coping strategies and maintain a positive mindset (Scoles, 2020), and hold personality traits associated with psychological protection (Lockhart & Perrott, 2024). To

reduce any potential risk, all participants will receive information that includes a quick reference mental health guide on stress responses from the Mental Health Commission of Canada. This resource outlines the signs and symptoms of a mental health crisis, provides self-help strategies, and indicates when to seek professional support. Participants will be given details on free counseling services and emergency contact information. During interviews, participants will be monitored for signs of distress. If a stress reaction is observed, the interviews will be paused, and psychological first aid will be provided. Psychological first aid involves identifying the concern, assessing the participant's immediate needs, referring them to the provided mental health resources and contact information, and assisting them in accessing further professional care if needed. Pseudonyms will be used to protect confidentiality for all participants, and all identifiable data will be removed. All material, audio recordings, and transcripts will be digitally stored in personal password-protected devices. All recordings will be deleted once the transcripts are anonymized and the researcher's validation that participant experiences were accurately captured has been completed.

## Summary

This chapter provided an overview of the study's design and detailed why a hermeneutic phenomenological qualitative method is the best approach. The aim of this study is to explore how paramedics remain anchored in the shifting tides of their emotionally and psychologically taxing work; how they construct their experiences of resilience in the field, and how their experiences foster posttraumatic growth, with a focus on narrative identity, spiritual beliefs, worldview frameworks, and the influence of community and social support. A qualitative method was chosen to explore their lived experiences. Such an exploration can yield insights that cannot be revealed in statistical analysis (Creswell & Poth, 2018). A hermeneutic

phenomenological approach that draws on the work of van Manen (1997, 2014, 2017) will be followed. This approach focuses on deep, interpretive reflection to uncover the meanings embedded in lived experiences. It acknowledges the interpretive nature of human experience and highlights the complexity of memory, emotion, embodiment, and meaning-making. It reveals lived experience (Creswell & Poth, 2018)**.** The lived experience will be viewed through several frameworks. The underlying frameworks: narrative identity (McAdams & McLean, 2013; McAdams & Pals, 2006), transformational learning (Mezirow, 1991, 2012), and posttraumatic growth (Tedeschi et al., 2018; Tedeschi & Calhoun, 1996, 2004) were reviewed as these lenses may reveal insights into how paramedics construct their experiences of resilience in the field and how their experiences foster posttraumatic growth.

The research sub-questions that stem from the central research question are presented, and the interview questions flow from there, with detailed descriptions aligning them with the literature. The purposeful convenience and snowball sampling recruitment processes were outlined, and the reasons for the inclusion of only paramedics who thrive in their roles were supported, aligning with the overarching research question. The procedures were outlined, from IRB approval, through recruitment and data collection, to the research being the research instrument as well as the analysis that will include reading and rereading, categorization, memoing, and horizontalization. Trustworthiness was discussed, including credibility concerns and how the hermeneutic design of the study promotes credibility and reliability. How researcher bias will be avoided using epoché and ensuring clear and accurate examples of participant accounts are included with the interpretation of the data was explained. Transferability was reviewed, explaining that generalization can only be in the existential sense, but the findings can

be transferred to other PSPs. Finally, ethical concerns such as protection of participant mental health were outlined, as well as assurance of confidentiality.

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