

12-22-2025

First Responder Resiliency with Line of Duty Critical Incident Exposure

Jennifer Miller
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Walden University

College of Psychology and Community Services

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Jennifer N. Miller

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Walden University
2025

Abstract

First Responder Resiliency with Line of Duty Critical Incident Exposure

by

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MPhil, Walden University, 2023

MA, Liberty University, 2011

BS, Liberty University, 2008

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Forensic Psychology

Walden University

February 2026

Abstract

First responders' mental health resiliency and distress tolerance following crises and adverse, sporadic, and consistent exposure to critical incidents, such as line-of-duty death, mass casualty incidents, and calls involving children, continues to be a public health challenge in the United States. In this phenomenological study, the role of critical incidents in the overall mental and physical health resiliency of first responders was explored. Resilience theory served as the theoretical perspective for this study. The central research question for this study was to investigate the lived experiences of first responders who have been exposed to critical incidents in the line of duty. A secondary question explored the processes that enhanced resilience factors before, during, and after experiencing a critical incident, resulting in posttraumatic growth. Data were collected through semistructured interviews and verified verbatim from eight first responders, specifically emergency responders, including emergency medical services personnel and firefighters. The data were analyzed using narrative analysis to identify themes in the experiences of first responders. Findings of this study support and inform strategies for promoting positive social change by reducing stigma, humanizing responders, and implementing preventive processes surrounding responses to cultural diversity and mental health. Themes and strategies identified improve the lives of first responders, their families, organizations, and the surrounding communities. Furthermore, this study informs intervention effectiveness strategies and treatment approaches for this population, which has been exposed to adversity, identifying key factors and processes that promote the safety and security of their communities.

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Dedication

To God, my son, Skyler (my great adventure), my late co-counsel, beloved companion, and best friend, Sarge (my little spoon), my family, Lacey (my best friend), Krista (my light in the dark), Dr. Winokuer (mentor), and all the men and women who sacrifice their time and peace to serve others, both military and first responders alike. My battle buddy died by suicide soon after we returned from Iraq/Kuwait in 2004. He was a firefighter for our unit and did not have the skills and tools to manage the demons inside, especially after a year or more of dehumanization and assimilation difficulties. Since his death, I have pursued degrees and training to help mitigate the mental health crisis that affects the military, veterans, and first responders. This research provides insights and practical processes to foster resilience and promote post-traumatic growth, thereby enhancing the efficacy and humanity of those who serve others in the face of adversity.

Acknowledgments

None of this would be possible without the suffering of unspeakable horror and tragic loss, coupled with the willingness to share and relive it all again for the betterment of others. “No Pain, No Gain” and “mission first” become hollow and trite in the face of this study. With my most profound appreciation, I acknowledge the burden, pain, and guilt of those who have endured, survived, and shared. To those who participated in this study, I am humbled and grateful to have learned from your experiences, to advocate for your psychosocial well-being, and to be present in your suffering. I would also like to thank Dr. Wallace and Dr. Lindahl, my committee, for their expertise and support in helping me become the best version of myself and become an expert in this field.

Table of Contents

| | |
|--|----|
| List of Tables..... | v |
| Chapter 1: Introduction to Study..... | 1 |
| Background..... | 3 |
| Problem Statement..... | 7 |
| Purpose of the Study..... | 9 |
| Research Questions..... | 10 |
| Theoretical Framework for the Study..... | 10 |
| Nature of Study..... | 14 |
| Definitions..... | 16 |
| Assumptions..... | 19 |
| Limitations..... | 21 |
| Significance..... | 24 |
| Summary..... | 27 |
| Chapter 2: Literature Review..... | 28 |
| Literature Search Strategy..... | 30 |
| Theoretical Foundation..... | 31 |
| Literature Review Related to Key Variables and Concepts..... | 38 |
| Resilience Mechanisms..... | 39 |
| Resilience and Self-Efficacy..... | 40 |
| Adversity and Competence..... | 41 |
| Goals of Resilience..... | 44 |

| | |
|---|----|
| Applied Resilience | 45 |
| Challenges to Applied Resilience | 46 |
| Resiliency Measures | 46 |
| Posttraumatic Growth and Resiliency..... | 47 |
| Firefighters..... | 48 |
| Occupational Stressors..... | 51 |
| Updates to ICD-11 | 62 |
| Summary | 67 |
| Chapter 3: Research Method..... | 69 |
| Research Design and Rationale | 69 |
| Role of the Researcher | 74 |
| Methodology..... | 75 |
| Participant Selection Logic..... | 76 |
| Instrumentation | 77 |
| Procedures for Recruitment, Participation, and Data Collection..... | 79 |
| Data Analysis Plan | 80 |
| Issues of Trustworthiness..... | 82 |
| Ethical Procedures | 84 |
| Summary..... | 86 |
| Chapter 4: Results..... | 87 |
| Setting | 88 |
| Demographics | 89 |

| | |
|---|-----|
| Data Collection | 91 |
| Data Analysis | 93 |
| Evidence of Trustworthiness..... | 94 |
| Credibility | 94 |
| Transferability..... | 95 |
| Dependability..... | 95 |
| Confirmability..... | 96 |
| Results..... | 96 |
| Theme 1: Critical Incident Exposure Effects..... | 97 |
| Theme 2: Vicarious Exposure Distress | 100 |
| Theme 3: Protective Factors for Adversity Resilience | 106 |
| Theme 4: Cultural and Social Stressors | 112 |
| Composite Description..... | 119 |
| Summary..... | 120 |
| Chapter 5: Discussion, Conclusion, and Recommendations | 122 |
| Interpretation of Findings | 122 |
| Interpretation: Theme 1: Critical Incident Exposure Effects | 124 |
| Interpretation: Theme 2: Stressors Congruent to Vicarious Exposure..... | 127 |
| Interpretation: Theme 3: Protective Factors for Adversity Resilience..... | 131 |
| Interpretation: Theme 4: Cultural and Social Stressors | 134 |
| Interpretation of Theoretical Framework..... | 137 |
| Limitations of the Study..... | 138 |

| | |
|-----------------------------------|-----|
| Recommendations..... | 139 |
| Implications..... | 140 |
| Conclusion | 141 |
| References..... | 142 |
| Appendix: Interview Protocol..... | 176 |

List of Tables

Table 1. Participant Interviews 90

Table 2. Themes and Subthemes 94

Chapter 1: Introduction to Study

First responders, such as firefighters, law enforcement officers, and emergency medical workers, experience rates of suicide, mental illness, fatigue, burnout, substance use disorders, and divorce that continue to increase (Sharp et al., 2022). The ability of first responders to tolerate distress and adverse experiences can minimize the collateral damage that weighs on these men, women, their families, and their departments. Lowery and Cassidy (2022) and Cheung and Li (2023) stated that exposure to traumatic adverse events such as violence and human suffering increases the risk for suicidal ideation, burnout, and substance abuse disorders. Correlations of physical and mental health problems for first responders, such as stress, manifest themselves in many forms, including cognitive, physical, and biopsychosocial effects (Paoline & Gau, 2023; Wang et al., 2021). First responders' exposure to high-stress, high-acuity calls with minimal time between calls often creates dysregulation, sleep problems, and poor stress management.

Researchers and educators alike continue to link physical and mental health, particularly in the first-responder population (Paoline & Gau, 2023; Schweitzer-Dixon, 2021). Pitel et al. (2018) and Wang et al. (2021) stated that various unhealthy lifestyle choices for this population contribute to distress intolerance, often leading to daily functioning challenges. Challenges include the inability to self-regulate, such as the disturbance of sleep, chain smoking, overconsumption of alcohol, abusive relationships, and unhealthy food choices. Adverse exposure, low resiliency skills, and burnout contribute to dysregulation and challenges to daily functioning (Pitel et al., 2018). Stress accumulation, collateral damage from exposure, human suffering, and sympathetic

system overload affect the responder's ability to cope with daily tasks, job duties, self-care, and maintaining an optimal level of regulation or homeostasis, as well as their authentic self (identity).

Further, due to the rotation of shifts and the nature of the first responding culture, there is a greater risk for anger issues, increases in use of force, negative coping strategies, and mental health issues. In the environments in which they work, there is little allowance for the processing of traumatic adverse events. Molnar et al. (2017) acknowledged that the certainty of these occupations is that they will be exposed to sights, sounds, smells, and tactile sensations that will affect them for days following their shift. Traumatic event exposure is cumulative, often causing collateral effects. Christopher et al. (2018) conceded that long-term exposure to stressors affects the first responder's ability to self-regulate, resulting in excessive force, alcoholism, suicide, and depression. Paying attention to and understanding the lived experiences of first responders is critical to improving mental health strategies, education, resiliency training, decreasing deaths by suicide, and breaking the stigma surrounding the first responder culture of seeking help as a weakness or a provider inadequacy.

In this study, I aimed to explore the lived experiences of first responders who have experienced a critical incident in the line of duty, as well as the processes and skills that promote resilience and posttraumatic growth. Increased awareness and conceptualization of the essence of the experiences of first responders following critical incident exposure may increase the possibility for responders, organizations, and educators to assess, teach, and adapt to promote personal and interpersonal growth

following exposure to stressors. In this chapter, I provide an overview of the study's background, including a summary of the existing literature, and outlines the literature gap that this study aims to address. Additionally, I include the study problem statement, study purpose, and research questions. I also outline the study's theoretical and conceptual framework, including pertinent definitions for the study's phenomenon and a summary of the assumptions, scope, and delimitations. The final portion of this chapter covers the significance and the chapter summary.

Background

Unique occupational stressors specific to the first responding culture, or specific constellation, due to the adverse exposure increase the prevalence of internalizing emotions and dehumanization of self, such as suicide, suicidal ideation, substance abuse, mental illness, depression, unhealthy lifestyle choices, and interpersonal conflict, continue to be an ongoing social concern for individuals, families, organizations, and communities (Zheng & Maercker, 2021). Maercker and Augsburger (2019) have urged recent updates to the DSM-5 and the International Classification of Diseases (ICD-11) regarding stressor-related disorders, hyperarousal, and perceived threat (World Health Organization [WHO], 2018), which are particularly relevant to first responders due to prolonged activation resulting from occupational exposure. Posttraumatic stress disorder (PTSD) symptom clusters, specifically Cluster 3, are the perception of threat based on threat responses, manifesting in alertness to environmental factors, exaggerated startle response, and hypervigilance, as relevant to the first responding population (Carleton et al., 2025). The fluctuations between the sympathetic and parasympathetic nervous

systems, which attempt to regulate before, during, and after a call, are often affected, as well as the likelihood of calls and back-to-back exposures occurring within one shift.

Hyperarousal affects stability and regular functioning in social, work, and family settings. Sharp et al. (2022) stated that the effects on first responders' well-being and mental health are prevalent, specific to family issues, the mental health and well-being of their families, and domestic violence because of spillover from occupational stressors. PTSD symptoms include mood alterations or negative cognitions about the traumatic event, an alteration in arousal reactivity regarding the event intrusion symptoms, persistent avoidance of specific stimuli for a minimum duration of one month, and a decline in clinical functioning in one or more areas (American Psychological Association, 2013). Emergency responders often experience symptoms of hyperarousal and hypoarousal, resulting in an inability to self-regulate due to prolonged activation and exposure to adverse circumstances that frequently keep responders in an elevated state of threat response (Dent, 2020; Miller, 2022). Overworking the autonomic nervous system creates difficulties for responders in maintaining a work-life balance and a healthy socio-emotional balance. Ebersole et al. (2020) discussed the autonomic nervous system's contributions to sudden cardiac arrests and the link between the body's aerobic and anaerobic systemic challenges and demands as firefighters respond to calls, and the body's ability to transition from activation to rest to recovery as an interplay between the sympathetic and parasympathetic nervous systems.

Jankowski et al. (2020) found that clinical practice and psychological research on positive psychology models demonstrated marked improvements in subjective well-being

when managing negative affective symptoms. First responders and their families should have a better understanding of the sympathetic and parasympathetic responses, as well as best practices for self-regulation, which can empower responders with protective factors and increase their mental health awareness (Masten et al., 2021). Understanding the link between the resiliency of law enforcement officers and firefighters in critical incidents in the line of duty, as well as the psychophysiological effects and perceptions (Lanza et al., 2018) of critical incidents, is imperative for the responders, their families, the organizations to which they belong, the community, and the country. Occupational stressors and demands that affect the system's internal regulatory system, which is designed to maintain balance, can cause the body to remain in a state of dysregulation. Dent (2020) proclaimed that system imbalance caused by trauma causes short-circuiting in the system, altering an individual's social engagement, personality, and the body's ability to regulate the nervous system. Shift work, life demands, traumatic/chronic exposure, violence, and human suffering contribute to unhealthy coping in attempts to self-regulate, as well as burnout, compassion fatigue, and vicarious traumatization.

Function impairment, emotional dysregulation, and subjective well-being effects can occur unconsciously or explicitly in response to a trigger (Fitzgerald et al., 2018). Du Toit et al. (2022) held that identifying protective traits or skills, also known as psychological resilience and hardiness, is essential amongst groups to help maintain depression and anxiety symptoms, to inform interventions. Triggers and reactions to what triggers an individual are subjective, as the individual's worldview or paradigm controls the narrative of the responder's experiences. Miller (2022) posited that mindfulness,

grounding, cognitive strategies, and an individual's understanding of their metacognitive process facilitate the ability of an individual in a dysregulated state to learn to regulate themselves with awareness as a key component, thereby increasing the responder's ability to access feelings of control and well-being. Therefore, understanding and conceptualizing lived experiences, perceptions, and critical incidents in the line of duty provided valuable insights into crisis response, postvention, helpful/unhelpful processes, and preventive approaches.

Cultural implications and stigma are often present in first-responder organizations, and researchers work tirelessly to identify protective factors that prevent long-term damage and mitigate adverse effects. Suicidality and suicidal ideation continue to be a concern for first responders as the emotional labor of being the responding entity to trauma, tragedy, and disaster (Moslehi et al., 2025). Vicarious trauma is the empathetic response that occurs when an individual witnesses or learns about the traumatic experiences of others (Hallinan et al., 2021). First responders are often not aware of the psychological implications of their occupation, and outside of the physical risks, there are psychological effects due to exposure, frequently leading to mental health issues (Alleaume et al., 2025; Jones et al., 2020). Understanding and acknowledging exposure effects contribute to the humanization and active approach necessary to mitigate mental health challenges for first responders. Furthermore, Hallinan et al. (2021), Janoff-Bulman (1992), and Molnar et al. (2017) considered first responders as one of the occupations with experiences that challenge the assumption that one is invulnerable.

Bearing witness to the pains of humanity is an occupational challenge for the first-responding population (Molnar et al., 2017), contributing to further studies by McDonald et al. (2022) to identify researched ways to improve awareness, mindfulness, and interventions that contribute to the resiliency of high-risk occupations. Further study and understanding of the implications of not being invulnerable acknowledge the importance of humanizing responders, both for the responders themselves and the community.

Resiliency and the mediating of post-traumatic stress symptoms, behavioral health variables, as well as peer services, have proven to be helpful for post-disaster responses (Finney et al., 2015; Straud et al., 2018). Awareness of preventative services, such as critical incident debriefs and psychological first aid, humanization of the responders, and organizational buy-in, is necessary for gaining traction against the mental health crisis within the first responding communities. Gaps in the literature include firsthand experiences of law enforcement officers and firefighters with a history of critical incidents while in the line of duty. This study aims to address the gap in the literature by exploring the lived experiences and perceptions of law enforcement officers and firefighters who have a history of exposure to critical incidents in the line of duty. It also seeks to learn from these responders about the processes and ways they cope with exposures, with the goal of promoting resilience and posttraumatic growth.

Problem Statement

First responders face numerous challenges, including feelings of terror, helplessness, and fear that are often not typical of the human experience, but are

exacerbated by occupational exposure (Naik & Khan, 2019). Burnout, fatigue, use of force, death by suicide, and many other mental health challenges continue to affect first responders, specifically law enforcement officers and fire service personnel. Crane et al. (2022) acknowledged the need for resiliency training and growth, specifically for first responders, as they are the first on the scene to take control, prevent loss of life, maintain order, and protect peace. Cognitive and mindfulness skills can increase law enforcement officers' and firefighters' tolerance and resilience. McDonald et al. (2022) stated that mindful awareness is a significant protective factor that positively benefits first responders in managing distress as a successful intervention for post-traumatic growth. The global pandemic was another sentinel event in highlighting to the government and society in the United States the personnel shortages and the workforce necessary to maintain healthy mental, physical, and psychological boundaries, as well as the psychological capital required to sustain a tolerance for shift work and the fluctuations of hyperarousal and hypoarousal.

Understanding the protective factors indicative of increasing responder resilience, minimizing deaths by suicide, and the negative effects of exposure to critical adverse events and circumstances contribute to the gap in research specific to the first responding culture. Mediating products of psychological capital, resiliency, and dysregulation processes are better suited to serving the first responding communities following a critical incident while in the line of duty. Capacities for resilience are predictive of various biopsychosocial factors, including environmental, social, psychological, and biological determinants that contribute to an individual's resilience outcome (Crane et al., 2022).

In this study, I present a collaborative understanding of the diverse experiences, perceptions, and effects of first responders, with a particular focus on the mental health challenges they encounter during and after critical incidents while on duty. Exploring and identifying the present biopsychosocial factors of resiliency and the factors lacking in psychoeducational training for first responders contributed to a better understanding of perceptions and the explanations first responders provided for their lived experiences before, during, and after exposure to a line-of-duty critical incident. Data collected in this project expands the necessary concepts for preventive strategies, support systems, programs, and resiliency training protocols to promote posttraumatic growth. Limitations of this analysis acknowledged the need for more research specific to responders' experiences due to the subjectivity of resiliency conceptualization. Learning from experiences, processes, challenges, and interpretations can enable researchers to understand better the individual and interdepartmental processes surrounding critical incidents in first-responder cultures, as well as the factors that promote psychological capital and distress tolerance.

Purpose of the Study

In this qualitative study, I aimed to identify resilience factors in first responders before, during, and after a critical incident. I aimed to gain a deeper understanding of the experiences of first responders following exposure to or involvement in a critical incident in the line of duty. The data collected from this research provides a collaborative understanding of the diverse experiences, perceptions, and effects on first responders, as well as the mental health challenges they face following a critical incident in the line of

duty. Moreover, enhancing the understanding of perceptions and the explanations of first responders regarding their lived experiences before, during, and after a critical incident expanded knowledge of support systems, programs, and resiliency training to promote post-traumatic growth. Learning from these experiences, processes, challenges, and interpretations, educators, researchers, and stakeholders within the first-responder community gained a deeper understanding of the individual and interdepartmental processes surrounding line-of-duty death incidents in first-responder cultures.

Research Questions

RQ1: What are the lived experiences of first responders who experience a critical incident while in the line of duty?

RQ2: What processes or factors enhance posttraumatic growth and resiliency in first responders following a critical incident while in the line of duty?

Theoretical Framework for the Study

The theoretical framework for this qualitative study aligned with resiliency theory. Trauma is an experience that is relative (subjective) to the individual and has its basis in perception and paradigm (Fleur et al., 2021; Halaj et al., 2024). Often, when exposed to traumatic events or crises, according to Figley (2012), emergency service workers, ambulance drivers, firefighters, and law enforcement officers frequently can have trouble maintaining functionality and tolerating stressors due to disturbed sleep, intolerance to distress, and work-life imbalance following traumatic events while on shift. Resilience and posttraumatic growth (PTG) are not the same. Posttraumatic growth is the positive psychological changes that occur following trauma, while resiliency is the ability

to manage and recover despite adversity (Elam & Taku, 2022). To function and make meaning following a crisis, the individual either has resiliency processes in place or learns skills to promote resiliency, psychological hardiness, and posttraumatic growth. Kobasa (1979) proposed that hardiness and function comprise personality characteristics that mitigate the effects of stressful occurrences and one's ability to function. The components reiterated by Kobasa et al. (1982) are challenge (belief that change is typical in life, encouraging one to grow and readjust), commitment (involvement of self, rather than alienation involving cognitive appraisal), and control (one has influence, opposite of helplessness in the face of adversity). Naik and Khan (2019) discussed posttraumatic growth, which is the growth that can evolve amongst trauma survivors as they face adversity, development, and healthy changes following a traumatic experience. Posttraumatic growth often aligns with resiliency and is frequently discussed within the context of resiliency theory, including improvements in interpersonal relationships, psychological changes, stress-related growth, the ability to create new goals and direction, and a heightened sense of spiritual life.

Logical connections between the framework presented and the nature of my study include posttraumatic growth, which is a positive impact or growth following a vicarious or stressful experience, benefiting the responder through growth and positive psychological changes despite exposure to the traumatic event (Naik & Khan, 2019). The resiliency concept, which involves personal growth following adverse exposure to high-risk experiences, is characterized by consistent expectations to maintain composure and control. Several theorists share this general definition, as resilience becomes a topic of

literary research (Greene et al., 2004). Resiliency as a phenomenon and the conceptualization of individual resilience are often subjective and, to date, have become a social science phenomenon. The factors that promote resilience contribute to an individual's psychological capital, thereby magnifying posttraumatic growth outcomes and enhancing the responder's ability to maintain functionality and create meaning.

Resiliency theory emerged from the study of children with psychopathology risks, finding promotive and protective factors that support higher levels of resilience (Masten et al, 2021). Researchers have studied trauma and postcatastrophic responses and prevention regarding adverse traumatic experiences. The phenomenon of resilience, as well as the theory of resilience, continues to develop within the social sciences as the importance of competency-based and skill-building training is crucial to acknowledging distress intolerance, adaptive coping to foster posttraumatic growth, most specifically following tragedy, trauma, threats to safety, and the Covid pandemic (Carbajal et al., 2022; Greene et al., 2021; Matto & Sullivan, 2021; Pink et al., 2021). Over the years, the definition and meaning of resilience have evolved, with several multidisciplinary perspectives on what resilience is and the factors that promote it.

Resilience models and theoretical frameworks for resilience have evolved through empirical studies to promote research-informed, positive practices (Masten & Powell, 2003; Wyman et al., 2000). Critical concepts of resiliency theory, such as adversity, stem from a study referred to by Antonovsky (1979) as a catalyst for deficits being illness-based or pathogenic focusing on vulnerabilities or risk factors such as poverty, adverse social conditions, poverty, as well as genetic and environmental

factors (Garmezy, 1971; Rutter & Madge, 1976; Werner & Smith, 1982). Van Breda (2018) found no universal link, and some showed little to no loss of functioning following an adverse event. The pioneer researchers of resilience are Murphy, Garmezy, Werner, and Rutter, whose aim was to inform the processes to understand how some individuals were able to “bounce back,” for lack of better terminology, when some had difficulties with functionality and returning to pretrauma or precatastrophe functioning (Masten, 2013). Posttraumatic growth and individual tolerance for distress have multiple contributing factors, as research efforts increase.

Masten (2011) explained that the theory of resilience approach shifted from a model based on deficits to models based on competency for the promotion of protective factors, allowing practitioners to use and plan for the “when” approach (preventative) as opposed to the “what if” postvention responsive approach (Yates et al., 2015, p. 773). Over the years, researchers have concluded that resiliency conceptualization is a process and/or a capacity to overcome adverse circumstances, as well as the development of critical terms for a theoretical, empirically based scientific application in positive psychology.

Psychological health and the support of psychological health of those with a greater propensity of exposure to traumatic experiences is invaluable to developing postvention, prevention, and resiliency training (Crane et al., 2022). Competence and trauma-informed models are encouraged by researchers (Southwick et al., 2014), as the nature of the first responder population due to occupational stressors is the realistic

acceptance of exposure, posttraumatic stress responses, burnout, unhealthy coping, and dysregulation.

To understand and conceptualize the processes, experiences, and factors that first responders encounter following a critical incident in the line of duty, the lived experiences of the responders are the most relevant procedures for gathering the necessary information to advocate, protect, and serve responders. Greene (2002) discussed the theoretical assumptions of resilience, highlighting social environmental factors and the more that can be learned about first responders' resiliency, which can highlight potential needs for the responders. The law enforcement and firefighter population are an at-risk population due to on-the-job exposure (adversity) and a phenomenological study provides the necessary data needed to understand the viewpoints or experiences of the population of research (Errasti-Ibarrondo et al., 2018), as well as solidify what processes and factors are currently working well, subjectively as adversity can be individually, organizationally, to include chronic or acute circumstances (Yates et al., 2015, p774). The lived experience and understanding from the first responders' perspective contributed to an understanding of the phenomenon and the factors that responders consider when building and maintaining resilience.

Nature of Study

In this qualitative study, the specific research design I employed was a phenomenological approach, aiming to better understand the lived experiences of first responders' resiliency following a critical incident. Ravitch and Carl (2021) defined the qualitative approach as an iterative process of understanding assumptions, meaning

making, and the lived and working experiences of law enforcement officers. Specifically, I employed a phenomenological approach to understanding the lived experiences of first responders who have experienced a critical incident while serving in the line of duty, with the aim of identifying the factors that support coping, posttraumatic growth, and resilience. First responders historically have a cultural stigma to seeking mental health training and counseling, as the culture of masculinity has been present in such types of organizations since the 1960s (Miller, 2022; Rawski & Workman-Stark, 2018). Often, responders rescue, help, protect, and serve their communities, creating a superhero, larger-than-life image both for the responders and the communities, which can lead to the dehumanization of the responder, magnifying the cultural stigma, and fostering a call for strength/toughness, and invulnerability.

Phenomenology is crucial for understanding the lived experiences of a stigmatized culture in the United States. Merriam and Tisdale (2016) described qualitative research as a systematic process of contributing to a specific problem or phenomenon, also known as action research. The data collection and instruments for my planned research design were based on interviews with law enforcement officers and firefighters who have experienced a critical incident while serving in the line of duty. Face-to-face interviews with a recording device were necessary to gather data and observations. The data sources for these questions included interviews with firefighters and law enforcement officers, peer-reviewed articles, and fieldwork conducted as part of a comparative study of resiliency factors.

The personal knowledge, perceptions, feelings, interpretations, and assumptions of first responders regarding their understanding of critical incidents, their effects during and after the incident, factors of resilience, and coping mechanisms were collected through semistructured interviews, allowing for firsthand data collection and exploration of their lived experiences. The flexibility to ask the following questions contributes to the depth of data collection, as semi-structured interviews enhance the data and inform the study's phenomenon and population (Patton, 2015; Ravitch & Carl, 2021). Focus groups are often helpful in phenomenological studies; however, the semi-structured interview is best suited for the proposed study due to the nature of the research and the participants' willingness to open up and share authentically. Moustakas's (1994) data analysis for transcendental phenomenology employs an analytical approach, in which the researcher analyzes and assesses the collected data. I provide further information on the nature and methodology of this study in Chapter 3.

Definitions

Adversity: the negative experiences and contexts likely to disrupt or challenge development or adaptive functioning. In the first term, adversity is subjective to the person, place, group, or systems potentially affected and dependent on several other factors (Obraadovic et al., 2012).

Autonomic nervous system (ANS): the part of the nervous system that controls the body's automatic functions. The brain determines whether to sleep or be awake, a process essential for the body's survival, often referred to as the "fight or flight response" (Waxenbaum et al., 2023).

Burnout: personal and occupational stress resulting from a progressive loss of energy, idealism, and goals (Sage, 2012).

Competence: Successful adaptation and the capacity to meet expectations culturally, individually, in a system, or a group are definitive of competence (Havighurst, 1972; Masten et al., 2006).

Critical Incident: Any event faced by emergency responders causing them to experience extreme reactions that can interfere with their ability to function both while on scene and beyond, off scene (Aumiller & Goldfarb, 2011).

Dehumanization: The denial of some part of one's humanity. Often implying less than human (animalistic), inhuman (mechanistic), or more than human (deistic). (Haslam et al., 2008).

Distress tolerance: The ability or perception to withstand aversive negative emotional states or the act of withstanding internal states from a stressor catalyst (Leyro et al., 2010).

Metacognition: The process of “thinking about thinking” (metacognitive knowledge) or the ability to control and monitor one's cognitive process (metacognitive control), fundamental in the role of education and learning (Fleur et al., 2021).

Metacognitive competence: A metacognitive skill that allows individuals to assess and organize their thought processes to increase awareness and learning (Fleur et al., 2021).

Paradigm: “A set of assumptions, attitudes, concepts, values, procedures, and techniques that constitutes an accepted theoretical framework within, or a general perspective of, a discipline” (*APA Dictionary of Psychology*, 2018b).

Parasympathetic nervous system: Part of the autonomic nervous system responsible for the “rest and digest,” countering the activation of the “fight or flight” threat response, slowing the heart rate, stimulating the digestive system, relaxing the body, constricting the pupils, and conserving energy, located in the nerves of the brain stem (Porges, 2022).

Posttraumatic growth: The growth that can evolve amongst trauma survivors as they face adversity, development, and health changes (Naik & Khan, 2019).

Posttraumatic stress: Symptoms such as re-experiencing, avoidance, and hyperarousal following a traumatic event as a response to trauma to de-stigmatize the fight or flight response (James & Gilliland, 2017).

Psychological Capital (PsyCap): Comprises resilience, hope, efficacy, and optimism as reliable indicators for measuring job satisfaction and performance (Lowery & Cassidy, 2022).

Psychological hardiness: A personality trait that mitigates adverse reactions following stressful events, increasing resilience, and improving mental health outcomes (Coetzee & van Dyke, 2018; Harry, 2019; Mund & Mishra, 2025; Wiebe, 2020).

Resiliency: The successful adaptation, coping, and stress management following stressful and traumatizing occurrences, including cultural, social, biological, and

psychological considerations, as well as self-assessment and metacognitive awareness (Kruger & Dunning, 1999; Southwick et al., 2014; Straud et al., 2018).

Self-efficacy: Refers to an individual's belief in their capacity to execute behaviors necessary to produce specific performance attainments (Bandura, 1977, 1986, 1997).

Sympathetic Nervous System: Part of the autonomic nervous system responsible for activating the threat response as the functional map for physiological reactivity, emergent behavior, and emotional responses to threats (Porges, 2022).

Trauma: Any exposure to actual or threatened death, sexual violence, significant injury, experienced by learning about, witnessing, or experiencing directly, involving helplessness, horror, or intense response of fear (*APA Dictionary of Psychology*, 2018a).

Vicarious trauma: Learning about and witnessing the traumatic experiences of others, resulting in an empathetic response (Hallinan et al., 2021).

Well-being: A subjective state of positive mental and emotional health, characterized by emotional, social, physical, workplace, and societal balance (Davis, 2024).

Window of tolerance: A term initially coined by Dan Siegel (1999) to illustrate the typical/normal body/brain reactions following adversity and the arousal zone for optimal functioning.

Assumptions

In this study, I explored the perceptions of first responders regarding the role of their lived experiences of critical incidents while on duty, as well as the processes and coping factors that promote posttraumatic growth and resilience. An assumption

applicable to this study is that all participants have experienced a critical incident that is identifiable while on duty. Furthermore, participants' experiences were the best way to capture the essence of the phenomenon, as they were willing to be forthcoming at their comfort level, open, and honest during the interview process.

A second assumption of the study is that the participants had a positive metacognitive understanding of their experiences and perceptions, characterized by a growth mindset. Phenomenological research aims to understand the essence of social reality (Blaikie, 2000; Crotty, 1998). The assumption is that the participant is the expert on their own reality, considering the ontological assumptions that are both internally and externally constructed by the participant (Spiegelberg & Shuman, 1982). The responder's perception and narrative are subjective, based on a range of factors that comprise the metacognitive process of the responder's experiences, perceptions, and meaning-making.

Finally, the assumption of intentional knowledge, critical to the phenomenological approach, involves the many constructs and the intentionality associated with the concept of the mental state (see Brentano, 1874). For this study, the assumption of lived experiences is a compilation of various mental states, including intentions, judgments, love, hatred, beliefs, and hopes (see Alhazmi & Kaufmann, 2022). In other words, it is not what exists externally but the person's understanding of the experience, based on the individual's paradigm and conceptualization of meaning.

Scope and Delimitations

Although researchers have investigated this issue, the topic has yet to be explored as an intentional initiative approach to operationalizing the importance of

humanization. By examining the essence of responders' experiences, researchers can gain insight into what responders perceive as barriers to resilience and posttraumatic growth, thereby gaining a deeper understanding of the effects on responders. The factors, processes, and experiences of first responders in the aftermath of a critical incident were found to be similar to their reactions to the incident itself (Rowe & Macauley, 2019). Mika-Lude et al. (2023) noted that the literature on dehumanization is extensive; however, further exploration and understanding of first responders' processes, factors, circumstances, and perspectives are best achieved by talking with individuals with experience (Moustakas, 2011) during critical incidents while on duty.

The perceptions and conceptualization of the lived experience of first responders was the most effective way to address the metacognitive, psychological, and physiological effects of the social, cultural, and environmental impacts on the population. The state of being dehumanized was explored through semi-structured interviews for a deeper conceptualization of lived experiences through the perception of the first responders, who endure exposure to cultural implications and the public. A deeper understanding of first responders' perspectives, assumptions, understanding, and overall paradigms provides culturally informed strategies and interventions for the social sciences, interventionists, protective/risk factors, needs assessments, and crisis response.

Limitations

The phenomenological qualitative research approach aims to understand, explore, and describe a phenomenon experienced by a specific group or organization,

using human science inquiry (Moustakas, 2011). Ravitch and Carl (2021) explained that qualitative research has a particular focus, unlike quantitative research, which is often broader in its approach to gathering information and exploring specific concepts and contexts. The insights gained from this study include identified themes, informed policy development, and preventive measures in populations with similar occupational risk factors and stressors. Due to the nature of qualitative research, establishing validity is crucial for researchers to accurately represent their findings, thereby accurately depicting the participants' experiences (Ravitch & Carl, 2021).

Researchers must approach the data critically to ensure trustworthiness, rigor, and quality. Careful observation and attention to the details of the scientific method were essential for capturing the essence of the first responders' experiences and perceptions of processes, as well as their subjective understanding of a critical incident. Guba (1981) detailed the standards of the qualitative approach as confirmability, transferability, credibility, and dependability to capture the essence of different paradigm values. The findings of this study enhance transferability, ensuring applicability to other first responders and similar agencies.

The project's biggest challenge was recruiting enough first responders to share their experiences with a critical incident and discuss their perceptions, as well as the effects of the experience on them. This limitation included aligning interview times with individuals who work various shifts in different states. There is an accumulation of stressors among first responders despite many strides to mitigate stigma and first responder hesitancy. Fisher and Lavendar (2023) stated that the responders interviewed

continue to experience stigma and feelings of hesitancy when discussing mental health and factors about well-being. Although there have been changes and advances in stigma-breaking and mental health awareness, a barrier exists between talking about it among and between fellow law enforcement officers and “head shrinkers.” I am not a head-shrinker, but overgeneralizations and assumptions of counselors and the field of psychology are natural for this population, contributing to the stigmatization of mental health and first responders.

First responders are often reluctant to discuss critical incidents and their use as a coping mechanism for assorted reasons, including a perceived vulnerability, inadequacy, and fears of interdepartmental retribution (“Emergency Responders and the Dangers of ‘Masculinity Contests,’” 2018). This population is not usually open about their experiences, feelings, and thoughts due to organizational, community, and internal pressures (*Breaking the Mental Health Stigma in First Responder Communities*, 2024). Emotions, feelings, and intrusive thoughts exist due to cultural stigma and dehumanization.

Moreover, it translates to being perceived as weakness, vulnerability, or a flawed ability to perform effectively. Self-perceived thoughts, feelings, or emotions about incidents often affect their functionality, feelings, emotions, or worldview. Ravitch and Carl (2021) stated that the strength of the qualitative approach is the participant, as the topic is sensitive and can potentially trigger or elicit shutdown, as opposed to participation in a semi-structured interview. Law enforcement officers are considered a vulnerable population, and the researcher must approach the study with ethical

considerations and without research bias. One way to ensure an ethical approach is to maintain confidentiality and obtain informed consent, with the understanding that participants can withdraw from the study at any time if they become uncomfortable (Sanjari et al., 2014). The participant's safety and control were essential in maintaining the ethical parameters of the research process.

Another challenge to the project was separating the clinical mind, as my typical approach to interviewing is motivational interviewing and Socratic questioning to encourage the metacognitive process. Researcher bias is also a limitation in qualitative studies (Patton, 2015; Ravitch & Carl, 2021), which I addressed with mindful consideration. Mitigation and clarity of biases are crucial as I am a licensed professional counselor supervisor, a critical incident debriefing responder, a combat veteran with similar experiences, as well as a line of duty death, and an animal-assisted responder with a history of post-traumatic stress.

Finally, maintaining awareness of personal assumptions and a clinical understanding of this subject matter was also an important focus to ensure assumptive awareness and researcher accountability. Due to the nature of the phenomenon and the population's vulnerability at the close of the interview, a list of available resources for psychoeducation, counseling, and resilience skills training will be provided to all participants following the interview process.

Significance

Scholarly communities need more input regarding the lived experience and essence of resiliency factors for first responder personnel before, during, and after a

critical incident while in the line of duty. This study has many social implications. The first is identifying and creating effective intervention strategies with culturally sensitive and trauma-informed care, with an awareness of the metacognitive cultural bias, including the consequences of dehumanization and meta-dehumanization (Mika-Lude et al., 2023). The phenomenon of dehumanization/meta-dehumanization continues to be a risk factor predictive of stigma magnification.

As a secondary implication, the posttrauma approach and intervention are much-needed tools for mental health, especially for first responders. I aimed to identify resiliency factors that inform preventive skills and interventions, capture the essence of first responders' experiences with critical incidents while serving in the line of duty, and share these findings with the social science community to highlight factors that enhance resilience and foster post-traumatic growth. A third implication of this study is to minimize or decrease the turnover of mental illness among first responders, raise awareness, and create a movement of mentally and emotionally preparing law enforcement officers and firefighters for the effects of their jobs. Millions of dollars are spent on these services to develop a technically and tactically proficient responder; however, addressing self-efficacy, distress tolerance, metacognition, and the long view of suffering does not take precedence, as well as breaking down the barriers to mental health for responders (MacLean et al., 2025) then the cost is insurmountable for the responders, their families, and their organizations.

Critical incident exposure and resilience factors, as identified through the lived experiences of the first responders interviewed, guided research aimed at understanding

the phenomenological aspects of factors that first responders considered essential for integrating into practice to serve the community better. Burnout, compassion fatigue, mental illness, death by suicide rates, attrition, vicarious trauma, and many other adverse situations contribute to first responders' distress, pressure, and traumatic experiences (Kyron et al., 2021; Makara-Studzińska et al., 2020). Critical incidents, processing, and re-assimilating into a citizen role are experiences of first responders for which there is no training at a recruitment level. First responders often put their lives in precarious situations to serve the community, constantly transitioning quickly from a hyper-aroused state to being contributing family members.

Although much collateral damage develops throughout a first responder's career, one critical incident type that often first responders cannot ignore is a line-of-duty death. A critical incident, such as a line-of-duty death, is the death of a brother or sister-in-arms while serving in the line of duty (Belsches, March 2025). Critical incidents and trauma are subjective to the participant. Another outcome is learning the types of critical incidents that often cause more difficulties for first responders than others. Further, first responders' experiences are frequently different (subjective), and a more precise understanding and exploration of similarities can allude to the differences, allowing for continuity of research momentum.

Upon completing the research, resiliency factors were identified that contribute to the overall quality of life for first responders and promote posttraumatic growth. The study factors identified contribute to the data necessary for first-responding agencies, clinicians, and mental health professionals to aid in the treatment, training, crisis

response, and preventative education essential for improved mental health outcomes, as well as informing organizations, leadership, and policymakers on the vital needs of first responders.

Summary

The literature provides evidence that first responders are vulnerable populations exposed to adverse circumstances, contributing to a spectrum of mental health and substance abuse challenges as a significant public health concern (Paton et al., 2008). There is a need for research-based interventions, resilience, and informed policy guides nationwide in multiple settings (Yates et al., 2015). Adaptive functioning in response to cumulative risk and risk prevention promotes resilience in vulnerable populations by fostering healthy connections, relationships, and skills in regulatory and executive functioning, as well as emotional and social learning, enhancing problem-solving skills to enable a return to homeostasis or optimal functioning with a metacognitive approach (awareness) through growth and the identification of individual-level interventions (Miller, 2022), while regulating the core adaptive systems (Aber et al., 2011; Blair & Diamond, 2010; Hawkins et al., 2005; Wyman et al., 2000). The cultural transformation of the first responder population requires individual buy-in, institutional transformation, systems policy adherence (Aber et al., 2011), as well as the acceptance of the vulnerability of the group (humanization), aiming to highlight their humanity in contrast as a strength, not being classified as less than (weakness) because of circumstances beyond their control.

Chapter 2: Literature Review

Clinical interventions, research, and literature are invaluable to the social science application and posttraumatic growth necessary for the best outcomes for the prevention and minimization of trauma's prolonged effects and treatment of PTSD. Trauma exposure is an unavoidable circumstance for most law enforcement officers and firefighters that can cause difficulties managing emotions, daily functioning, psychological distress, sleep disturbance, and poor self-efficacy. There has been an increase in critical incidents, for example, line-of-duty death (LODD) occurrences throughout the United States among law enforcement personnel and firefighters, increasing the risks of fatigue, mental illness, substance abuse, family issues, emotional fatigue/ dysregulation, and burnout in these professions.

Historically, first responder culture has been at greater risk for developing mental illness, attempts or deaths by suicide, and substance abuse-related disorders (Cheung & Li, 2023; Lowery & Cassidy, 2022; McDonald et al., 2022; Wang et al., 2021). Bevan et al. (2022) investigated emergency first responders, defining resilience as the ability to adapt successfully and overcome difficulties under adverse circumstances. The reaction following an individual's exposure to a stressor or event is a trauma reaction, creating distress, both physiological and psychological, inhibiting the responder's daily functions and responsibilities.

Due to stigma, occupational stress, dehumanization, and often unclear or undefined protocol, responders are at higher risk of avoidance, suicidality, vicarious traumatization, misconduct (use of force), and mental health-related disorders. This

phenomenological study examines the factors that increase the distress tolerance and resilience of first responders following exposure to critical incidents.

Professional well-being of emergency first responders such as firefighters, paramedics, law enforcement officers, and communications personnel (Arble et al., 2018) is essential to the minimization of turnover and workload sizes (Casto, 2022; Kath & Solowski, 2022), fatigue, declining well-being, and stress specific to the workplace, noted Bevan et al. (2022) following a qualitative systematic review for the furthering of research on program specifics for well-being and resiliency. Bevan et al. (2022) searched the ProQuest, PubMed, and ScienceDirect databases, finding 984 articles that specifically addressed population, perspective, and subject interest. Reviews concluded that the relational factors between the organization and the team pointedly impact stress-related coping following critical incidents, natural disasters, accidents, emergencies, and tolerance (Bevan et al., 2022). The factors that affect responders after exposure contribute to identifying the research gap.

In recent years, positive psychology has gained increased focus as the correlation between positive psychological outcomes and well-being has been shown to subjectively increase traits of resilience (Chuning et al., 2024). However, operationalization continues to compile positive constructs such as grit, hardiness, and resiliency as character strengths or behaviors that foster a thriving rather than a survival approach (Lopez et al., 2019). Grit is a perseverance-promoting trait, or “driving force” (Duckworth et al., 2007), that enables individuals to persist in their pursuit of long-term goals (Duckworth & Gross, 2014). Hardiness is characterized by maintaining emotional stability under stressful

circumstances, as well as adaptability and performance under conditions of distress and adversity (Maddi et al., 2012; Sandvik et al., 2013). Grit and hardiness are often constructs or behavioral traits that promote resilience and posttraumatic growth.

Resiliency is the positive, healthy adaptation process in the face of significant sources of stress, tragedy, trauma, adversity, and threats to safety (American Psychological Association, 2014, para. 4). Resiliency outcomes considerations include social, cultural, psychological, and biological factors (Southwick et al., 2014), as well metacognitive awareness and the ability to self-assess (Kruger & Dunning, 1999). Self-assessment and the metacognitive understanding of experiences increase the responder's ability to self-regulate and increase self-efficacy. The following research review highlights the key themes, terms, theories, and developments related to resilience in law enforcement officers and firefighters, drawing on posttraumatic growth, resiliency theory, and the metacognitive approach. This review informs researchers, clinicians, educators, and organizations that teach, develop, or treat this population.

Literature Search Strategy

The primary search strategy for this research project involved using the Walden Library as a resource to identify full-text articles from databases such as APA PsycINFO, ScienceDirect, Medline, ERIC, Directory of Open Access Journals, and EBSCOhost. Specific keywords were used to conduct the literature review for my dissertation research topic. The primary keyword search was *"resilience," creating the foundation of the search, which resulted in thousands of peer-reviewed articles published between 2019 and 2023*. The subject term search was then expanded to include *resilience, distress*

tolerance, post-traumatic growth, psychological health, and mental health. I added *first responders, firefighters, and law enforcement officers* to narrow the search to the study's population. The same approach or search strategy was my approach, narrowing the search for a *line of duty death AND vicarious trauma AND burnout AND compassion fatigue AND critical incident.*

Line-of-duty death resiliency was the original aim of the project; however, there was little to no research regarding line-of-duty death as well as critical incident resiliency. Therefore, I focused on the critical incident rather than a line-of-duty death. Google Scholar was also used to search for related articles; however, several did not fall within the appropriate date range. Many articles led me to find more up-to-date articles for the project, as well as constructs that promote resilience among individuals and processes/terms to minimize distress intolerance.

Theoretical Foundation

Theoretical models and frameworks have emerged from empirical studies to use resilience research in creating and enhancing positive developmental processes (Masten & Powell, 2003; Wyman et al., 2000). Research-informed practice and empirical data have been catalysts for the development of practice-informed research, as well as for establishing the collection of practical information to facilitate the translation of research and critical concepts into practical applications. Yates et al. (2015) encouraged the acknowledgment of resilience-based approaches that are not being applied and accessed as a resource for the study and growth of resilience-based views. Moreover, the broadening and application of these practices enables researchers, consultants, and

clinicians to use practice-based science alongside science-based practices, and vice versa. In other words, the effects and results of resiliency-based practices are best understood by implementing and practicing such models as applied to specific individuals, groups, and entities.

As researchers and theorists continue to gather information and empirically based research data, the multiple definitions and conceptualizations of resiliency have evolved into a unified conceptualization over the last half-century. Masten (2014) defined resiliency as “the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development (p.6).” Resilience is the ability to maintain functionality in an individual, group, or system’s different regular functions before, during, or after a threat, loss, or catastrophe within one of those entities.

Regarding applied science, it is necessary to note the exposure to danger, adversity, or hardship, and the positive adaptations require social scientists to address and operationally define terms involving the understanding and development of resilience (Yates et al., 2015). For years, there has been inconsistent agreement or knowledge on whether resilience is a state, a trait, or an outcome. Masten (2014) conceptualized resilience as a developmental process or capacity to experience and overcome adverse circumstances. The development of resilience has led to the emergence of critical terms and operational definitions specific to the positive adaptation or distress tolerance of individuals, groups, or systems, as resilience has become a distinguishable theoretical approach in applied science and positive psychology.

Outcomes of adversity for many early studies of vulnerabilities led researchers to identify these individuals as having invulnerability or being invincible, thus the development of several definitions of resiliency, such as a “stable trajectory of healthy functioning after a highly adverse event” (Bonanno, as cited in Southwick et al., 2014, p.25338) and “individuals who adapt to extraordinary circumstances, achieving positive and unexpected outcomes in the face of adversity” (Fraser et al., 1999, p. 136). Adversity exposure, in accordance with posttraumatic growth, builds resiliency in the responder by forging the necessity to learn processes and skills they may not have had before the exposure.

For many years, researchers have focused on the adverse effects of trauma; however, traumatic events, mass casualties, and specific occupations due to the nature of their occupations cannot minimize the amount of trauma that happens, rather Southwick et al. (2014) found researchers and clinicians shift the lenses to fostering competence-based models and teaching methods to enhance resiliency to promote growth and strength-based inclusion. It is paramount to assist first responders in coping adaptively with crisis and trauma, as the impact of COVID-19 and the distress intolerance symptomology identified can hinder their ability to return and remain functional across entities (Carbajal et al., 2022; Greene et al., 2021; Matto & Sullivan, 2021; Pink et al., 2021). Assimilation and the ability to balance their internal systems often result in difficulties functioning within their organizations and their families outside of work.

Definitions of resilience encompass adaptive and healthy functioning over time following exposure to adverse events (Southwick et al., 2014). As research develops,

understanding definitions, resiliency factor determinants, and resiliency factors continues to inform resiliency science. Southwick et al. (2014) and their colleagues, drawing on multidisciplinary perspectives, convened following a plenary panel meeting of the International Society for Traumatic Stress Studies to better address some of the resilience questions and to understand the complexity of factors and determinants of resilience. Resiliency factors and protective factor characteristics continue to be a focus for researchers as the increase in mass casualties, the COVID-19 pandemic, and the continuation of first responder suicide and psychosocial difficulties continue to increase despite risk factor awareness by social science researchers. Understanding resiliency is a multifaceted approach that considers understanding and definition, moving away from a binary viewpoint to looking upon resilience as a process, a trait, or an outcome (Southwick et al., 2014) as resilience studies continue to be investigated amongst distinct groups, identifying factors for growth and improved mental health outcomes evolve.

Holland-Winkler et al. (2023) provided several resilience statements from different resiliency perspectives, including the ability to recover, grow, and withstand changes in demand and stressors, positive adaptation while experiencing adversity, fostering psychological coping mechanisms, and persisting in psychospiritual homeostasis after disruptive events. The psychological and physiological factors are vital in understanding the effects on firefighters, the different effects, and the need for multiple resilience components. Psychological resiliency measures, such as confidence and adaptability, are measured using subjective questionnaires like the Connor-Davidson Resilience Scale (CD-RISC), which has been assessed for validity by the U.S. Air Force

(Holland-Winkler et al., 2023). The higher the score on the CD-RISC, the greater the level of psychological resilience, which is often used to assess anxiety, depression, and PTSD.

Crane et al. (2022) argued that supporting the psychological health of personnel at greater risk for exposure to traumatic incidents is crucial to effective intervention and support in developing templates for pre-training, posttraining, and strategies to promote resilience training. Potential types of traumatic events that first responders participate in are sexual violence, serious bodily injury, and the threat to death or actual death of a citizen or colleague (American Psychiatric Association, 2013, p. 271).

The nature of the firefighter's occupational expectations, physiological effects on their bodies, and the firefighters' stress level are related to the effects of the autonomic nervous system (ANS) and the hypothalamic-pituitary-adrenocortical (HPA) axis. Holland-Winkler et al. (2023) stated that the regulation of the body's stress response for many firefighters could be affected due to the dysregulation of the HPA axis (release of cortisol) and the ANS release of epinephrine and norepinephrine. During the activation of the stress response, blood pressure, cognitive function, heart rate, and energy stores are compromised, and the body's inflammatory responses weaken the immune system. This weakening of the immune system returns to homeostasis after the stressful event (Holland-Winkler et al., 2023). Nevertheless, the nature of the firefighter occupation, time restraints, high call volume, poor coping mechanisms, unawareness, and other multifaceted factors can inhibit the ability to return to homeostasis.

The phenomenon of resilience and the theory of resilience have continued to evolve throughout the social sciences, as researchers have studied diverse types of occupations that are susceptible to distinct occurrences and varying levels of stressors. Van Breda (2018) conducted a critical review of resiliency research to inform researchers, specifically in social work, as a scientific study, rather than the latest “fad” in research. The roots of resiliency theory originated in the study of adversity, as referred to by Antonovsky (1979), which focused on pathogenic (illness-based) origins, highlighting deficits in social well-being and functionality. The focal point for many years of researchers studying resiliency was the examination of vulnerabilities, adverse social conditions, poverty, and schizophrenia risks, based on both genetic and environmental factors (Garmezy, 1971; Rutter & Madge, 1976; Werner & Smith, 1982). Researchers identified several factors associated with adverse outcomes; however, there was no uniformity, and some individuals showed minimal to no loss of functioning (Van Breda, 2018).

The theory of resilience continues to evolve as researchers gain a deeper understanding of the phenomenon through extensive research, informed by the application of resiliency theory, posttraumatic growth, hardiness, and humanization constructs, as well as numerous developments that have emerged throughout the research process. Researchers who pioneered the perspective of resilience are Murphy, Garmezy, Werner, and Rutter, as the aim was to inform the processes to understand how some individuals were able to “bounce back,” for lack of better terminology, when others had functional challenges in returning to pre-trauma or pre-catastrophe functioning (Masten,

2013). Further research on groups can contribute to understanding the phenomenon of mental health resilience among first responders, the cultural implications of dehumanization, turnover (Mika-Lude et al., 2023), and the overall efficacy and well-being of first responders. Awareness and intentional humanization, achieved through metacognitive awareness of biopsychosocial effects, are integral to the well-being and development of hardiness in first responders.

Pioneers of resilience theory have influenced the practices and frameworks of many disciplines, concepts, and approaches, leading to an overarching shift from deficit-based models to a model of adaptive practices, processes, and ideas (Masten, 2011). As the emphasis on resilience transforms to a competency-based understanding and promotion of protective factors and practices, the application of the resilience concept allows practitioners to shift from a “what if” and responsive approach to practice, to a “when” approach to those groups, individuals, and societies that have exposure to adverse vulnerabilities (Yates et al., 2015, p. 773). An initiative-taking approach to awareness and acceptance of the need to learn and enhance skills to manage and tolerate distress is crucial to the development of effective interventions (Miller, 2022). Active intentional approaches mitigate compartmentalization that many use to survive. Still, the traumatic experience and subjective responses of the responder do not return to the compartment to process and manage their exposures; thus, avoidance is the opposite of awareness, leading to post-traumatic stress symptoms.

Literature Review Related to Key Variables and Concepts

A proactive approach to the mental health resiliency of first responders using key variables and concepts found in this study enhances resiliency and posttraumatic growth. To best develop trauma-informed care approaches for the increase in resiliency, posttraumatic growth, a decrease in first responder mental and substance abuse challenges, and a decrease in death by suicide, key variable conceptualization is necessary for a blueprint of intervention and postvention strategies. Crane et al. (2022) discussed the lack of a blueprint for delivering resiliency training to first responder groups in a study aimed at enhancing and delivering resiliency interventions. The first-responder population at the organizational level has learned many lessons regarding the effectiveness of resiliency training through studying military experiences (Crane et al., 2022).

Specific variables observed and analyzed were organizational scholarship on the delivery of resiliency skills, resiliency training, and factors influencing the intersections of best approaches (Crane et al., 2022). Specific factors analyzed in this article are post-training conditions, pretraining conditions, strategies for instruction, and effects of training on outcomes for first responders' mental health when mitigating the immediacy of a critical incident and risks to life, such as serious injury, actual or threatened death, and sexual violence (American Psychological Association, 2013; Crane et al., 2022). Identifying pre- and posttraining factors that responders identified contributed to the research gap.

Resilience Mechanisms

Over the course of half a century of research, core resources and protective processes within individuals, groups, and structural competence have emerged. One specific factor that serves as a defensive strategy is the use of risk-focused techniques, with the goal of achieving developmental improvement outcomes by minimizing exposure to adversity, primarily through preventive practices (Yates et al., 2015). One example of unnecessary risks would be on the scene of a fire where there are casualties, and the firefighters purposefully do not expose the public or neighbors to a burnt body. Grigorenko et al. (2007) stated that an unnecessary risk, in this instance, is the adverse impact on the public, which is modifiable and identifiable in context. Next are resource-focused techniques that closely facilitate risk-focused techniques to promote competence and counterbalance asset access for populations with adverse chronic circumstances or risk factors (Olds, 2002; Yates et al., 2015). An example of resource-focused techniques is free trauma-informed counseling for first responders and their families.

Lastly, the objectives of process-focused techniques are to restore, activate, and protect adaptive systems, with the aim of aligning with the processes identified as optimal for human resilience (Yates et al., 2015). Process-focused techniques include attachment-focused strategies employed by mentors and caregivers to promote safety, support, and consistency (Berlin et al., 2005). Personal effectiveness provides an opportunity to magnify the mastery of motivation, supporting successful engagement in challenging natural proclivities, as noted by Kahana et al. (2012). Blair and Diamond (2010) denoted the capability to regulate the self as the capacity to modulate behavior, emotions,

attention, and arousal in accordance with environmental or contextual demands. Finally, specifically regarding vulnerability and resilience, trust and social cohesion are crucial to adaptive systems and settings (Zautra et al., 2008). Organizational letdown and betrayal contribute to the dehumanization of the responder, often leading to the internalization of the problem rather than help-seeking. Analyzing first responders' lived experiences provides insight into their subjective perspectives.

Resilience and Self-Efficacy

As Bandura (1977) described, the conceptualization of self-efficacy leads the literature on resiliency through social cognitive theory, explaining the continuous interaction between behavior, cognition, environmental factors, and their determinants. Positive adaptations of a person were determinants of the individual's ability, and the situational contexts explained by Scoloveno (2018) in an integrative review of resilience and self-efficacy. Additionally, social cognitive theory provides determinants that create the construct, and social learning theory for resilience includes three key assumptions. The first assumption is that the continuous interaction between behavioral, mental, and environmental factors is self-regulatory; second, only the individual can obtain mastery and competence by selecting, organizing, and transforming the stressors; and third, the individual's self-efficacy is based on the belief that the more a person impacts their coping efforts (Scoloveno, 2018). There continues to be many theoretical lenses for the concept of resiliency, so studying populations affected as a specific group will add to the resiliency narrative.

Adversity and Competence

Two key terms in understanding and conceptualizing resilience are adversity and competence. Obraadovic et al. (2012) defined adversity as negative experiences and contexts that have a probability of disrupting or challenging development or adaptive functioning. In the first term, adversity is subjective to the person, place, group, or systems potentially affected and dependent on several other factors. Examples of adverse experiences could be an earthquake, a mass shooting, a duty death, a terminal diagnosis, or an armed robbery. Adverse circumstances affecting systems, individuals, and groups can be chronic or acute (Yates et al., 2015, p. 774). Chronic adversities are circumstances such as racism, poverty, poor leadership, and lack of cultural competencies, or acute, such as the sudden loss of a loved one or being held at gunpoint. Disruptions can occur individually, such as behaviors, stress, or symptoms, or in multiple settings and systems. For example, a flood can create challenges to broader systems, including families, communities, or the healthcare system (Yates et al., 2015). Yates et al. (2015) concluded that, despite the functioning level, adverse circumstances potentially compromise viability, adaptation, development, stability, or positive tolerance. Calling to learn more about responders' experiences, the subjectivity of what the responder identifies as a critical incident, and the factors and processes to create post-traumatic growth outcomes.

Competence is the second term to consider and understand to conceptualize resilience and posttraumatic growth, contributing to metacognitive competence and psychological hardiness. Successful adaptation and the capacity to meet expectations culturally, individually, in a system, or a group are definitive of competence (Havighurst,

1972; Masten et al., 2006). Early in the studies, competency, as defined by Western culture, was the tangible assessment of performance effectiveness in developmental tasks (Yates et al., 2015). Scholars continue to create and distribute research in a multicultural capacity. The historical definition of “bouncing back” has cultural, developmental, and contextual definitions, now on a global level (Masten, 2014; Ungar et al., 2013). Yates et al. (2015) wrote that resilience has several definitions. Resiliency within the scientific community continues to evolve within the social sciences, as science reveals that resiliency has many mitigating factors to consider.

Moreover, it is essential to note that the multilevel intricacies of adaptation and its relevance to competence lend support to the idea that many adaptation considerations result in competence, thereby identifying key reselling indicators. When observing individual adaptations, the indicators to consider are the presence of positive internal indicators such as happiness, well-being, health, and a cohesive sense of self, in contrast to external indices about personal achievement, moral compass, and quality of interpersonal connections (Brody et al., 2013; Luthar, 2006; Yates & Grey, 2012). The variations in resilience, despite cultural, historical, or situational context, often indicate ongoing adversity analysis.

The findings of Crane et al. (2022) recommended that further research be conducted on the self-reporting of first responders, the understanding of self-stigmatization, the implicit theories responders hold about resiliency, the facilitation of resiliency training program efficacy, and the roles of leadership in promoting resiliency

training. The significance of this study lies in its recommendations for research needs and the necessity of exploring challenges to resiliency training for first responders.

Papazoglou (2023) discussed the stressors and factors contributing to the first responder demands and the potential challenges for this population, such as burnout, suicide risk, PTSD, stress, moral injury, and moral hazard that pose mental health issues within the scope of job demands. First responder stress management and mental health issues, as well as the well-being of responders, are a worldwide issue, as well as crisis intervention and organizational stress on this population. The significance of this study lies in the necessity for researchers and educators to support responders, resilience, and job satisfaction. The essence of the first responders' lived experience following a critical incident can potentially provide key insights into the barriers and protective factors that can enhance resiliency training and the delivery of preventive and post-intervention strategies.

Fisher and Lavendar (2023) discussed the challenges of developing mental health programs and policies for first-responding agencies. There have been advances in the decrease of mental health stigma and the awareness of mental health options; suicide is a catalyst for increasing policies and programs for first responders, as well as the cumulative stressors of the demands of workload and shift work (Fisher & Lavendar, 2023). Emerging themes for opportunities and challenges to policy increases are the existence that many have some time of program, with challenges to smaller, more rural organizations, the enhancement opportunities to aid responders in self-care and mental health awareness is present, the need for clinician specializing and capable of working

with first responders, confidentiality protection for peer support not trained in CISM procedures, lack of advocacy within organizations, and collaboration interdepartmentally for resource sharing and effective practices (Fisher & Lavendar, 2023). Identifying obstacles from the responders themselves enables the promotion of opportunities for growth and change, thereby enhancing the mental well-being of first responders, their families, their organizations, and the communities they serve.

Goals of Resilience

Preventive science has developed the ability to identify mechanisms within various systems that promote positive change, utilizing multi-level goals and key variable measurements as a conceptual framework for application and intervention efforts (Yates et al., 2015). The resiliency model promotes positive and healthy well-being, rather than a curative or distress-based approach. Bryan (2005) implored that resiliency-guided practices have not only promoted “doing ok” in the cultural, developmental, and historical context but have catapulted the stakeholders and consumers of specific groups subject to adverse vulnerabilities to foster positive adaptations and distress tolerance. Resilience is a key factor in posttraumatic growth as a protective factor to aid against challenges to effective functioning when exposed to adverse experiences (Pietranoni & Prati, 2008). The relevance of the proposed research project lies in the necessity of understanding the lived experiences of first responders to identify resilience-guided goals for this cultural group.

Applied Resilience

Intervention and preventative science efficacy are the most effective in a multifaceted modality with various levels of intervention and cumulative protection. Wyman et al. (2000) theorized that the adaptive functioning of cumulative risk is best addressed with a culmination of risk prevention and response promotion. Social, emotional learning, and critical thinking skills have been identified as promoting resiliency in at-risk populations, maintaining healthy connections and relationships, and building regulatory and executive functioning skills (Aber et al., 2011; Blair & Diamond, 2010; Hawkins et al., 2005). Identifiable individual-level interventions are crucial to core adaptive systems that support healthy development and protective factor components.

Resilience-informed practice is often employed in neighborhoods and communities to foster the resilience of a specific community or social group. Patton et al. (2008) highlighted that the community-based resilience approach had been used in public health issues and community-level interventions to mediate individual resilience factors. Security and hope regarding social capital, neighborly connections, and residential stability foster neighborhood resilience, positively affecting individuals. Most importantly, resilience, research-based interventions, and informed, policy-guided policies are needed across nations for interventions in multiple settings (Yates et al., 2015). The more research gathered from the responders, the more effective the preventative measures will be.

Challenges to Applied Resilience

To effectively address a system or vulnerable population, several challenges and limitations exist that impact the effectiveness and success of resilience-informed practices and interventions. Yates et al. (2015) identified that the ability to incorporate the science of preventive objectives or resilience research findings is crucial for overall buy-in from all stakeholders involved. Many cultures resist change, help, or accept that vulnerabilities exist and need to be addressed. The transformation of a cultural or social group, such as law enforcement officers or firefighters, will require individual buy-in, institutional transformation, systems policy adherence (Aber et al., 2011), as well as the acceptance of the vulnerability of the group aiming to highlight their humanity in contrast as a strength, not being classified as weak because of circumstances beyond their control.

Resiliency Measures

The complexity and nature of resiliency pose a challenge for researchers in gaining empirical support for a framework conceptually, as the debate continues over whether resilience is a trait or a state (Cajada et al., 2023). The Resilience Scale (RS) is a 25-item, standardized, self-report assessment measure that utilizes positive psychology characteristics rather than a deficit-based measurement tool, employing a 7-point Likert scale; the higher the score, the greater the participant's resilience (Cajada et al., 2023). The researcher's critical evaluation of the RS represents five dimensions: perseverance, stability, self-reliance, existential loneliness, and meaningfulness. Notably, these five dimensions are related to self acceptance and life satisfaction, as well as personal competence. Cajada et al. (2023) concluded their review by examining the origins of the

term resiliency and verifying and validating the constructs used within the scale to define resilience as “a product of emotional and cognitive fortitude.” The psychological and characteristic specificity remains challenging to itemize, such as self-efficacy, which is much easier to recognize, according to Cajada et al. (2023). Constructs and understanding identifiable traits, norms, and processes are necessary to advance residency research further on populations such as law enforcement and the fire service.

In conclusion, resilience research and conceptual frameworks for resilience offer tangible strategies and contexts to address the needs of various populations on both individual and systemic levels, with means to prevent the adverse long-term effects of adversity. Seligman and Csikszentmihalyi (2000) stated that facilitating developmentally positive outcomes reverses the focus of positive psychology from studying virtue and human strength. The collaborative effort of practitioners, clinicians, researchers, and consumers fosters a multi-synergistic approach to mitigating the effects of adversity and promoting a preventive growth mindset.

Posttraumatic Growth and Resiliency

Key variables and concepts to consider when developing an initiative-taking approach to the mental health resiliency of first responders for this study. To best establish trauma-informed care approaches for the increase in resiliency, posttraumatic growth, a decrease in first responder mental and substance abuse challenges, and a decrease in death by suicide (Schweitzer Dixon, 2021). I identified key variables for a blueprint of intervention and postvention strategies based on the participants' responses, which informed the metacognitive processes necessary to improve psychological

hardiness and efficacy, essential for resilience. Crane et al. (2022) discussed the lack of a blueprint for delivering resiliency training to first responder groups in a study aimed at enhancing and delivering resiliency interventions. First-responding population at the organizational level has learned many lessons regarding the effectiveness of resiliency training through studying military experiences (Crane et al., 2022).

Specific variables observed and analyzed were organizational scholarship on the delivery of resiliency skills, resiliency training, and factors influencing the intersections of best approaches (Crane et al., 2022). Specific factors analyzed in this article are post-training conditions, pre-training conditions, strategies for instruction, and effects of training on outcomes for first responders' mental health when mitigating the immediacy of a critical incident and risks to life, such as serious injury, actual or threatened death, and sexual violence (American Psychological Association, 2013; Crane et al., 2022). Identifying the factors and circumstances that promote well-being and posttraumatic growth can potentially inform best clinical practice and intervention training.

Firefighters

Straud et al. (2018) define resiliency as the successful adaptation, coping, and stress management following stressful and traumatizing occurrences. A qualitative study on the mediating role of sleep, anxiety, and depression on posttraumatic stress symptoms using 125 firefighter paramedic participants to identify psychological and behavioral health variables and the mediating effects of post-traumatic stress symptoms and resiliency (Straud et al., 2018). The variables in the mediating analysis included sleep, resilience, post-traumatic stress symptoms (PTSS), depression, and anxiety (Straud et al.,

2018). The significant findings of this study are that resilience is an essential mediating predictor of sleep, anxiety, depression, and PTSS. The study noted a strong relationship between post-traumatic stress symptoms and resilience; more importantly, when considering the mediating effects of sleep, anxiety, and depression, the direct impact between PTSS and resiliency was no longer significant (Straud et al., 2018). This study's findings are based on self-reports; although they are valid, the authors caution about the potential for stigma in the fire service, as the questionnaires were completed individually. However, the group setting may influence the severity of the firefighter's reports. Resiliency and preventative services, such as peer support services, have proven efficient in the minimization of behavioral health and suicidal risks. Therefore, fire service agencies would benefit from such preventive services, as they would be aware that there are circumstances where a referral for further processing may be necessary (Finney et al., 2015). The study identified helpful factors underutilized due to stigma and cultural barriers.

Firefighter Resilience

Firefighters have unique occupational factors that increase the prevalence of adverse psychological outcomes. Holland-Winkler et al. (2023) conducted a study to identify resiliency factors beyond the genetic component, targeting social, physiological, and psychological elements that promote successful improvements in resiliency. Firefighter shiftwork is a component that affects firefighter sleep, health, and biopsychosocial challenges, as well as hazardous exposure to chemicals, long-term mental health conditions, cancers, and cardiovascular disease (Holland-Winkler et al.,

2023). Firefighters cannot limit their exposure to traumatic events; therefore, developing research training and awareness of resiliency components creates essential information for researchers, clinicians, and educators.

Romero and Alvar (2021) discuss the physical and mental demands on firefighter professionals as well as exposure to adverse traumatic scenarios, family life, and other occupational requirements. A multidisciplinary approach to reselecting and optimizing firefighters, along with a collaborative and inclusive approach to mental, physiological, social, and spiritual wellness strategies, is essential. Human Performance Optimization (HPO) and Total Force Fitness (TFF) collaborated with the Department of Defense (DOD) in 2006 to improve the well-being, performance, and health of US soldiers and their families (Romero & Alvar, 2021). These organizations sought to develop a comprehensive approach to promote overall wellness, job performance, and health outcomes, aiming to sustain improvements and prevent career longevity issues, with a primary goal of optimizing human performance in firefighter wellness programs (Romero & Alvar, 2021). The firefighter health and wellness model comprises an interdisciplinary team that addresses the physical, emotional, mental, and environmental aspects of firefighter health and wellness. Romero and Alvar (2021) theorized the collaboration of physical considerations of injury recovery and rehabilitation, performance enhancement training, health-related parameters such as body composition and blood pressure, emotional parameters including coping mechanisms, self-esteem, stress management, environmental factors such as culture, support systems, social ethos, and interpersonal relationships. Moreover, the mental components encompass emotional intelligence, self-

awareness, sleep quality, and psychosocial health, thereby comprehensively optimizing human performance (Romero & Alvar, 2021). The lived experiences of firefighters following a critical incident provide insight into the awareness and strategies of resilience that are effective, as well as the interventions and conditions that can be integral to wellness, resilience, and stress management.

Occupational Stressors

First responders' exposure has several consequences for the individuals who serve in law enforcement, firefighting, emergency services, and communications. Challenges for these occupations are not new to research; since the COVID-19 pandemic, there has been a heightened awareness of the need for society to identify opportunities to support those who serve their communities. Stogner et al. (2020) discuss the ever-present stressors of underfunded and understaffed organizations. Law enforcement was directed to manage shutdowns and enforce mandates, such as social distancing, and other responsibilities directed by organizations' demands. These demands create increased challenges for responders, responding organizations, and their families.

Risk Factors

Risk factors are often a focal point during resiliency and distress-tolerant assessments to identify individuals, groups, or populations that may have specific characteristics that increase the risks of vulnerabilities within that population. As research on resiliency continues to grow and evolve, the study identified hopeful and potentially promotive factors that can increase resources and awareness of the factors or indicators that promote resiliency in some individuals over others, focusing on protective resources

and developmental skills (Cicchetti, 2011; Yates et al., 2015). Creating processes that counteract risk promotes the growth and development of responders.

Risk factors are associated with specific groups or populations, often leading to difficulties or adverse outcomes (Yates et al., 2015). Throughout history, profound circumstances and events have served as catalysts for paying closer attention and providing support and responses to law enforcement and other first-responding agencies (Stogner et al., 2020). Due to the strains of circumstances such as September 11th, 2001, the HIV epidemic, and COVID-19, researchers and academics have much to learn to help organizations alleviate occupational stress, depression, and suicide (Christopher et al., 2024). The shortages within the first-responder community contribute to mental health strain; effective interventions can be developed by learning the responders' needs directly from them.

Christopher et al. (2024) conducted a randomized, multisite feasibility clinical trial examining the effects of mindfulness-based training on aggression, stress, and health in law enforcement officers. The risk factors of policing are stress, causing physiological resiliency challenges, health issues, a decline in mental health, and attentional processing at times, leading to excessive force, depression, and increased likelihood of aggressive behaviors (Christopher et al., 2024). Identifying risk factors specific to the responding population will increase the effectiveness and potential outcome of posttraumatic growth.

Emotional Labor and Burnout

Following the COVID-19 pandemic, the influx of burnout, and the culmination of exposure to traumatic stress, the crisis among healthcare workers was undeniable. The

emergence and understanding of resourcefulness in resilience and defense mechanisms were integral in preserving and protecting healthcare workers on the frontlines. Di Giuseppe et al. (2021) discuss the awareness and conscious adaptability of coping mechanisms in an alternative manner. Many healthcare workers rely on defense mechanisms, also known as unconscious operations, to stress responses, helping the individual to shield their awareness of feelings, internal conflicts, external stressors, and thoughts that aid in mediating their reaction to traumatic experiences.

The three categories of defense (defense levels) are mature (high adaptive), neurotic (obsessive-compulsive and neurotic), and immature (minor-image distracting, action, disavowal, and major image-distorting) (Di Giuseppe et al., 2021). The relevance of the proposed study lies in increasing awareness of the potential defense mechanisms present in firefighters and law enforcement officers, as well as in developing adaptations for protective factor functioning. Valliant (1994) discussed the development of defensive functioning as the capacity to protect against bodily and psychological consequences. In other words, dysregulation during exposure is likely more prevalent among first responders.

Di Giuseppe et al. (2021) concluded that resilience, burnout, and perceived stress, as well as the association of defensive functioning, contributed to higher levels of personal accomplishments, the ability to withstand and recover from stressful experiences, and the minimization of depersonalization, emotional exhaustion, and the perception of stress. Identifying and creating a metacognitive approach to understanding the culture of firefighters and law enforcement provides tangible, resiliency-based

techniques to help these organizations further develop at both the individual and departmental levels.

First responders' occupational responsibilities extend beyond responding to calls, extinguishing fires, preventing violence, directing traffic, apprehending criminals, and mitigating threats to the community. Those researchers, leaders, and professionals need to be aware of cultural risk factors in various occupations, particularly among firefighters and law enforcement personnel. Jeung et al. (2018) discussed emotional labor and burnout as job stressors when there is a possibility that emotional work may become part of occupational responsibilities. It is essential to understand this term, as burnout refers to physical, emotional, and mental exhaustion resulting from prolonged exposure to one's profession (Jeung et al., 2018). Organizations often suffer the adverse effects of burnout, which can lead to interdepartmental stressors and poor management, creating another stressor for organizations already exposed to significant levels of adversity. Maslach and Jackson (1981) defined burnout as "a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people-work' of some kind."

Often, burnout and the term compassion fatigue are used simultaneously concerning risk factors and awareness of the development of protective factors for post-traumatic growth and resiliency. Stamm (2010) defined compassion fatigue as an individual's occupation that involves helping others who have been traumatized, and the individual internalizing the suffering and pain of the person/people they are aiding. It is necessary to differentiate burnout and compassion fatigue, as with compassion fatigue, depression symptoms and fear are separated from being exposed directly to a traumatic

event, causing an internalized threat to psychological safety and challenging the person's worldview (Coetzee & Klopper, 2010; Kim et al., 2020).

Schaufeli et al. (2020) discussed a psychometric approach to conceptualizing burnout, identifying four core dimensions of the construct. The development of instruments and measures continues to progress, as does the development of preventive constructs aimed at mitigating the global mental health crisis. The Maslach Burnout Inventory (MBI) has been the most widely used measure for burnout in publications, cited in over 80% of instances. However, Schaufeli et al. (2020) suggest there is more work to be done and set out to redefine burnout using a dialectical approach defining four factors: exhaustion, impaired emotional impairment, cognitive impairment, and mental distancing with secondary dimensions comprised of psychosomatic complaints, depression mood, and psychological distress by building on a previous qualitative study of 49 practitioners' definitions of burnout.

Jeung et al. (2018) encouraged further research on burnout risk and protective factors to contribute to stress management programs. Identify and understand the perceptions of first responders' experiences with critical incidents, as well as the processes and factors they utilize to cope with and overcome adversity. Furthermore, as research evolves, understanding patterns of behavior and exploring different conceptualizations of burnout across cultures and organizations with multiple methods contributes to scientific growth in the field (Jeung et al., 2018; Schaufeli et al., 2020). Further study into first responders' experiences and the stigma within the culture of first responding schemas allows for the development and growth of this social challenge.

Vicarious Trauma

Exposure to trauma for firefighters and law enforcement officers is inevitable, and the consideration of cumulative trauma or stress is another essential factor to consider in first-responding populations. McDonald and Lancaster (2022) discuss mindful awareness (MA) and distress tolerance as predictors of mental health in trauma-exposed populations such as first responders. In a cross-sectional study, McDonald and Lancaster (2022) found that first responders (N = 176), contrary to the hypothesis, mindful awareness was more vital among first responders with elevated distress tolerance. The researchers for this project discussed the challenges of self-reporting and that mindfulness-based approaches are most beneficial for individuals with lower levels of distress tolerance.

Emergency Service Providers (ESP), specifically firefighters and law enforcement officers, are at a higher risk of exposure to human suffering, violence, loss, destruction, artificial and natural disasters, and mass casualty deployment, causing the development of vicarious traumatization. Hallinan et al. (2021) defined vicarious traumatization as the process of learning about and witnessing the traumatic experiences of others, which results in an empathetic response. Vicarious traumatization, also referred to as secondary traumatic stress conditions, is highly prevalent among firefighters, law enforcement officers, victim services, and emergency service personnel (Hallinan et al., 2021).

Molnar et al. (2017) developed and outlined a research agenda to establish a public health approach to aid professionals working in the fields with higher exposure probabilities to exposure and development of secondary trauma or traumatic stress causing occupational challenges in professions working in mental health, law

enforcement, fire response, emergency service, trauma, and victims' assistance, as well as other occupations with more significant risk to traumatic exposure daily for many. Types of exposures for at-risk populations are intimate partner violence, sexual assault, child maltreatment/abuse, suicides, homicides, and mass attacks such as the 2001 September 11th attack, the Boston Marathon attack in 2012, and the Sandy Hook shootings (Cacciatore & Kurker, 2020; Molnar et al., 2017). Based on the concepts of the shattered assumptions theory (Janoff-Bulman, 1992), researchers have discussed how first responders, as well as many other professions, experience circumstances that shatter the assumption of invulnerability (Janoff-Bulman, 1992; Molnar et al., 2017).

Acknowledgement of how the cultural stigma affects the identity and dehumanization of the first responders allows for awareness, posttraumatic growth, and first responder posttraumatic growth efficacy.

Prevention of negative health impacts, the mitigation of adverse effects, and the development of mental health disorders have been ongoing. Researchers approached the occupations knowing that responders and trauma professionals will inevitably bear witness to the worst of humanity, and they are working to mitigate this occupational challenge (Molnar et al., 2017). The growing need for improving awareness, prevention, and posttraumatic growth by way of resilience interventions is essential to the minimization of vicarious trauma effects, as well as attrition and organizational stressors.

Chronic Adverse Exposure

Chronic exposure to high stress and critical situations, accompanied by significant daily stressors, affects the window of tolerance and resiliency across various professional

fields. Professions worldwide have experienced elevated levels of stress, risk, and danger. The longer a person's exposure lasts, the more elevated the risks of violence exposure, human suffering, vicarious traumatization, and mental health difficulties. Law enforcement is one population meeting the above criteria, as homeostasis fluctuates daily while on shift. Christopher et al. (2018) acknowledged the effects on law enforcement officers and the maladaptive behaviors or outcomes that result from long-term exposure to stressors. Excessive use of force, alcoholism, depression, and suicide are often consequences for law enforcement (Christopher et al., 2018). Christopher et al. (2018) proposed a study to effectively increase resiliency and improve mental health by implementing assessments and improved protocols within agencies, aiming to enhance outcomes, mindfulness, and resiliency. First responders, such as law enforcement personnel, require support, intervention training, and resources to improve their effectiveness and outcomes.

Armed Forces personnel have long been the population studied to gain knowledge and empirical data for the effects of combat exposure. There are many names for the impact of combat, such as combat fatigue, post-traumatic stress, a soldier's heart, and shell shock, to name a few. War exposure affects mental health, job difficulties, familial discourse, burnout, and an overall decline in health (Vinokur et al., 2011). In American troops returning from war theaters, 30% of those returning report experiencing intrusions, avoidant behavior, and hyperarousal (Vinokur et al., 2011). Wartime is unpredictable, as there is often rest when the limbic system and threat response are at rest; however, crises and tragedy have an immediacy in combat.

Pebole et al. (2022) conducted a research study collecting data on post-9/11 veterans, examining trauma exposure, alcohol use, and PTSD to precede emotional regulation challenges. Seventy-four veterans with a mean age of 40 years completed questionnaires demonstrating the correlation between PTSD severity and emotional dysregulation (Pebole et al., 2022). Emotional dysregulation involves numerous automatic responses that are subconsciously triggered and, through neuroreceptors, conditioned by experiences to react to environmental threat variables. Efforts to consider the phenomena of dysregulation of the autonomic nervous system are essential to mitigating the effects of chronic traumatic exposure.

Stigma/Culture of First Responders

When strategizing systematic changes and responses to a public health challenge or crisis, cultural and organizational awareness and understanding are essential to developing the efficacy and sustainability of postvention and prevention strategies, plans, and curricula. Kyron et al. (2021) discussed that the mental health effects can be a direct result of a hostile working environment, as well as the absence of a positive approach from their work comrades/leadership to promote seeking help for mental health and to help those in need feel supported and safe to seek help. Further, the stigma also remains for many emergency service personnel as there are ideologies present such as stoicism, martyr culture (weakness, self-stigma, or dehumanization), poor self-efficacy, consequences for being open about difficulties, and outsider mentalities (Karraffa & Koch, 2016; Kim et al., 2018; Kyron et al., 2021; Ledingham et al., 2019; Mika-Lude et al., 2023). Dehumanization and meta-dehumanization continue to impact the cultural

implications of first-response agencies and those who serve within them. Mika-Lude et al. (2023) extended the importance and understanding of the impact of denying parts of one's humanity and the differences among the types of services. The experience and conceptualization of the first responders' perceptions and experiences inform stakeholders with the necessary information to inform best practices.

Suicidality

Suicidality and suicidal ideation have been an ongoing epidemic for emergency first responder organizations, as researchers continue to gather evidence-based research to mitigate this significant social health concern. The nature of emergency service personnel's occupational requirements puts these individuals and organizations at a greater risk for developing mental health disorders, post-traumatic stress disorders, harmful behaviors, as well as suicidal thoughts, plans, or attempts (Doyle et al., 2021). Beauchamp et al. (2023) conducted a cross-sectional study examining the relationships between suicidality and mental health among first responders seeking treatment and their subtypes. The detection and treatment of suicidality in first responders are challenging, as comorbidity often presents in these populations and differentiates among the various first responder subtypes (Jetelina et al., 2020). The importance of first responders to tolerate distress and break the stigma present in the first responding culture is essential to reducing suicidal ideation and deaths by suicide among the first responding culture.

Ponder et al. (2023) conducted a network analysis of 308 participants to examine the interrelated constructs of suicidality, generalized anxiety disorder, depression, and post-traumatic stress disorder using a measure of resilience. The association complexity

of psychological disorders, suicidality, and resilience in the first responding populations is critical for treatment, prevention, developing curricula, training, and differentiating between the subtypes of first responders.

Suicidality Amongst Firefighters. Bartlett et al. (2018) defined suicidality as behavior, attempts, and suicidal ideation specifically for firefighters when compared to the military, as well as the public. A quantitative study, conducted by Bartlett et al. (2018), intended to examine the associations between PTSD symptom severity, suicidality, and distress tolerance using bivariate correlations and descriptive analysis. Participants in this study were professional firefighters serving in both medical and fire suppression roles from a large metropolitan area (Bartlett et al., 2018). Instruments used in data collection were the suicidal behavioral questionnaire, revised (Osman et al., 2001), the Distress Tolerance Scale (Simons & Gaher, 2005), the Center for Epidemiological Studies Depression Scale (Radloff, 1977), Life Events Checklist Version 5 (Weather et al., 2013), and the PTSD –Checklist Civilian Version (Blevins et al., 2015).

One significant finding of this study is the relationship between low distress tolerance and higher risks of suicidal behavior. Further findings of the study were an increase in risk for global suicide risks with factors of depression symptoms severity, trauma exposure, and the female gender (Bartlett et al., 2018). One noted limitation by Bartlett et al. (2018) of this study is that the survey used the self-report method, and due to these limitations, the researcher finds future study implications that are interview-based on suicidality, PTSD, and cognitive mechanisms are imperative to furthering the understanding of the firefighters' unique experiences.

Suicidality Amongst Law Enforcement. Research shows that law enforcement officers, emergency service personnel, and firefighters are functionally mentally healthy. Throughout their careers, exposure to distress can cause psychological problems and result in suicidal ideation and a greater risk of carrying out an attempt (Kyron et al., 2021). In a cross-sectional study, Beauchamp et al. (2023) aimed to compare predictors of suicidality among first responder subgroups to inform occupation-specific interventions for law enforcement officers, firefighters, and emergency medical technicians. Using logistical regression models to inform the study, the mental health constructs varied among the different first-responding subgroups (Beauchamp et al., 2023).

Significant findings of the study were that posttraumatic stress disorder and depression were significant predictors for both law enforcement officers and firefighters, and amongst law enforcement officers, precisely substance/alcohol misuse was a substantial predictor of suicidality (Beauchamp et al., 2023). Resilience as a protective factor was prevalent for emergency medical technicians and law enforcement officers, informing theory and practice that resilience is a modifiable risk factor and a significant buffer to suicidality (Beauchamp et al., 2023). The significance of the proposed study lies in the lived experiences of different first-response entities, which aim to inform treatment modalities and preventive strategies more effectively.

Updates to ICD-11

Maercker and Augsburger (2019) explained that the adaptations to the ICD-11 regarding hyperarousal and perceived threat take a stricter approach than the DSM-5 and ICD-10. Subsequently, the eleventh update of the International Classification of

Disorders (ICD-11) brought to the forefront dissimilar views of mental disorders, specifically stress-related disorders (WHO, 2018). Symptom clusters for PTSD include re-experiencing traumatic events, manifesting vividly in intrusive thoughts, memories, nightmares, or flashbacks of the event/events. Cluster two is avoidance behaviors, which include activities, reminders, memories, thoughts, music, and people that trigger the traumatic experience. The third is perception based on heightened threat responses such as exaggerated startle responses, hypervigilance, or alertness to environmental factors.

Regular functioning and interactions with social, family, and work are affected by hyperarousal symptoms, resulting in a smaller window of distress tolerance and resilience behaviors. The significance of the changes and the importance of understanding the clusters lie in the psychophysiological and functional effects of prolonged activation threat response (Maercker & Augsburger, 2019), which emergency responders typically experience due to the demands of their chosen professions. First responders learning to manage the ability to return to homeostasis or downregulate are essential to controlling adverse exposure and transitioning from call to call without opportunities to re-regulate.

Internal Regulating Systems

To effectively treat trauma, a precise understanding of internal regulating systems and the prevalence of the body's chemical adaptations when thrown in and out of homeostasis is the center of clinical knowledge of neurophysiological effects. Dent (2020) employs the Window of Tolerance, a psychobiological theory developed by Stephen Porges (2011), drawing on Ogden and Fisher's (2015) concept of trauma, which posits that the psyche and soma connect to regulate subcortical signal defenses that are

hard-wired systematically. Neuroception refers to the interconnection of bodily and emotional processes in the limbic system and brain, often in opposition to logic (Dent, 2020). The Window of Tolerance conceptualizes the subconscious. Subcortical processes encompass one's sense of safety and security, differentiating the ability to engage or connect to self or others safely. Feelings of safety determine a person's ability to connect (Fitzgerald et al., 2018). Neuroception influences one's perception of well-being when hyperarousal is activated, and the perceived danger is concluded, potentially leading to unhelpful or maladaptive behavioral responses (Fleur et al., 2021). Learning the immediate and long term impact of exposure is essential to prevention and postvention strategies.

Neuroimaging Studies

Fitzgerald et al. (2018) conducted a study of neuroimaging to illustrate negative emotional states of emotional dysregulation and the individual's ability to manage threat responses because of PTSD, and to understand the pathophysiology. Fitzgerald et al. (2018) theorized that understanding PTSD and manifestations of symptoms regarding emotional dysregulation is complicated concerning neurocircuitry and the participating mechanisms affecting the brain's ability to understand the dysfunction of emotion, the processing of emotions, and understanding and regulating emotional functioning.

The study of neuroimaging results to better understand the brain's functions during tasks of in vivo exposure is conducted using neuroimaging made possible by functional magnetic resonance imaging (fMRI), which allows for the noninvasive observation of metabolic activity (Fitzgerald et al., 2018). The review of results enabled

researchers to pinpoint changes in neural levels of brain activity and the links to emotional processing, including emotional regulation. One necessary takeaway from the compilation of results and trigger appraisal is the control of responses based on hyperarousal or hypo-arousal, depending on the trigger (Fitzgerald et al., 2018).

Triggering awareness within the first responding community is best understood through a phenomenological approach to the experiences and perceptions of the first responder.

Emotional dysregulation and functional impairment can occur explicitly or unconsciously in response to a trigger (Fitzgerald et al., 2018), leading to a rumination effect within metacognitive processes. Individual awareness responses, such as cognitive strategies, grounding, and mindfulness, are necessary to counteract this (Miller, 2022). When automatic responses occur, the individual's perspective on their experience may lead to a dysfunctional reaction, emotional dysregulation (Fitzgerald et al., 2018), and problematic behaviors in daily functioning if traumatic experiences remain unprocessed, avoided, or ignored.

Trauma effects can create a system imbalance, short-circuiting the system, altering one's personality and relational engagement, and disrupting the regulation of the nervous system and the body (Dent, 2020). The overall design of the body's wiring for survival, such as the ability to return to homeostasis or optimal functioning following a stress response, is often complex for emergency responders. Dent (2020) held that the system fights to balance to preserve life, sustain safety, adapt to environments to survive, and maintain system balance (homeostasis). The responder's exposure to shift work and the possibility of back-to-back calls create a psychosomatic challenge for the responder to

regulate, as the parasympathetic and sympathetic nervous system attempts to manage the body's responses.

Tsakiris and Critchley (2016) defined mental well-being, optimal functioning in cognition, and personal motivation as crucial components to maintaining a balance of internal processing known as homeostasis. The systems in the body often struggle to maintain balance due to chronic trauma exposure or unpredictable environments, which can affect hormonal balances, the body's ability to fight disease, and distress tolerance (Dent, 2020). Rational thought processes are turned off during triggers or trauma synthesis while in states of hyperarousal to conserve energy, disrupting balance to bodily systems.

Firefighters and law enforcement officers are at an increased risk of developing post-traumatic stress disorder (PTSD) due to the nature of shift work, exposure to human suffering, and vicarious traumatization due to the nature of the chosen occupation. The American Psychological Association (2013) defines PTSD as a "Trauma and stressor-related disorder" in the Diagnostic and Statistical Manual of Mental Disorders. The criterion necessary for a stressor-related disorder is that an identifiable event must meet the standards set in the Diagnostic and Statistical Manual of Mental Disorders (American Psychological Association, 2013). PTSD includes mood alterations or negative cognitions about the traumatic event, alterations in arousal reactivity regarding the event, intrusion symptoms, persistent avoidance of specific stimuli for a minimum duration of one month, and a decline in clinical functioning in one or more areas (American Psychological Association, 2013). The awareness of symptomology and active skillsets in building

processes for exposure is imperative to create preventative services, training programs, and post-traumatic growth among first responders.

Summary

Reviewing the key variables and concepts for this study reveals that several factors enhance the overall well-being of first responders. In contrast, others minimize the positive outcomes that occur when individuals are consistently exposed to adversity, human suffering, and cultural stressors specific to these communities. Some mechanisms and processes aim to promote growth following critical incidents and adverse exposures; however, the goal is to learn more about the resilience mechanisms, protective factors, and the effects on first responders who are exposed to critical incidents, as well as what creates distress explicitly before, during, and after exposure.

Further, the stigma surrounding mental health and the implications of reaching out for health remain a risk factor (Mika-Luda et al., 2023). Posttraumatic growth and resilience enhance competency, self-efficacy, mindfulness, and metacognitive connection, promoting the well-being of first responders by understanding the perceptions and demands, specific to cultural stigma, vicarious exposure, autonomic nervous system dysregulation, and the ability to self-regulate from the perspective of first responders.

In conclusion, resilience research and conceptual frameworks for resilience offer tangible strategies and contexts to address the needs of various populations on both individual and systemic levels, with means to prevent the adverse long-term effects of adversity. Seligman and Csikszentmihalyi (2000) stated that facilitating developmentally positive outcomes reverses positive psychology as the study of virtue and the capacity of

human strength. A collaborative effort among practitioners, clinicians, researchers, and consumers fosters a multi-synergistic approach to mitigating the effects of adversity and promoting a preventive growth mindset.

Chapter three includes information detailing the methodology of this study. I explained the research design, the study's rationale, and the justification for the design method. Next, I describe my role as a researcher, identify potential biases, and outline any ethical challenges and implications that may arise. Next, I outline the participant selection process, recruitment methods, instrumentation, participation, and data collection procedures employed in this research study.

Chapter 3: Research Method

In this qualitative phenomenological study, I explored the lived experiences of first responders who have experienced a critical incident in the line of duty, the biopsychosocial effects of adverse exposure and distress intolerance, and the factors and processes that contribute to posttraumatic growth and resilience. Understanding the lived experiences of first responders, who face significant challenges, requires an appreciation of their difficulties, coping mechanisms, nervous system dysregulation, and biopsychosocial responses (Carbajal et al., 2022). I employed a phenomenological approach to conceptualize the lived experiences of first responders with a history of critical incident exposure while on duty, as well as the processes and factors that enhance coping, post-traumatic growth, and resilience. I collected data from first responders to identify themes regarding these perceptions. Lastly, I discuss procedures and trustworthiness, summarizing the key points from Chapter 3.

Research Design and Rationale

The phenomenon I explored in this study was the lived experiences of first responders with a history of critical incident exposure while on duty, with the aim of better understanding the factors and processes that facilitate overcoming obstacles to post-traumatic growth and resilience. The research questions that guided the study were as follows:

RQ1: What are the lived experiences of first responders who experience a critical incident while in the line of duty?

RQ2: What processes or factors enhance posttraumatic growth and resiliency in first responders following a critical incident while in the line of duty?

Much of the previous research on risk factors for the first-responding community identified factors that promote resiliency following distress tolerance assessments specific to populations, aiming to increase promotive resources and awareness of indicators and factors as a focal point for skills development and protective resources (Cicchetti, 2011; Yates et al., 2015). The primary concept of my study was the influence of post-traumatic stress on resilience among firefighters and law enforcement officers. Risk factors for these first responders include specific occupational stressors, which often have negative aftereffects for them and their families. Stogner et al. (2020) identified challenges specific to first responders, which were exacerbated during the COVID-19 pandemic and remain prevalent (and are becoming increasingly so) in underfunded and understaffed organizations. Public health mandates require law enforcement officers to enforce and manage social distancing, shutdowns, and all other regular duties within their unique job descriptions.

Risk factors and adverse stressors have been present; however, it often takes a sentinel event to get the attention of those who can have an influence (Cacciatore & Kurker, 2020). Research on emergency services populations has been ongoing for years, as evidence builds from researchers to work on not only postvention modalities but also to identify protective factors for responders. Adverse circumstances are an everyday occurrence for law enforcement officers and firefighters, not just pandemics, natural

disasters, and acts of terrorism (Stogner et al., 2020; Yates et al., 2015). Emotional labor and burnout are a reality for the first responding population, especially for healthcare workers (Kim et al., 2020). DiGiuseppe et al. (2021) suggested that understanding and preserving resiliency and defense mechanisms are crucial in protecting and maintaining the mental health of first responders. The identification of healthy processes, such as interoception as a coping mechanism, as social cognition and self-awareness as forms of coping, for first responders, is pertinent to the well-being (homeostasis) of the responder (Tsakiris & Critchley, 2016) as well as the mitigation of mental health and substance abuse disorders, and deaths by suicide among the population.

Christopher et al. (2024) declared the emergence of continued circumstances that strain the responding community, such as September 11th, COVID-19, and the HIV epidemic. The necessity for researchers and academics to help with the alleviation of occupational stress, burnout, depression, and suicide is more significant than ever. Resilience as a literary research topic has been an ongoing phenomenon of interest for social scientists, beginning with the ability to assess self-assess and an acknowledgment of the metacognitive process for improvement to social, psychological, cultural, and biological factors regarding resiliency outcomes (Kruger & Dunning, 1999; Southwick et al., 2014). The American Psychological Association (2014, para. 4) defined resilience as a healthy adaptive process that occurs despite threats to safety, adversity, trauma, tragedy, and loss, resulting in positive outcomes.

Given the definition, identifying the factors that promote growth and resilience amongst first responders is long overdue and is a disservice to those who serve.

Furthermore, the lack of training and preparation for responders to develop an initiative-taking approach, including a healthy mentality, competence, and efficacy to address stressors or problems that arise, is irresponsible. An initiative taking, skill-based, self-efficient approach is vital for promoting the humanization of first responders and the organizations they serve.

Researchers have identified that the focus on the adverse effects of trauma, though helpful, cannot minimize the amount of tragedy, trauma, and disaster exposure for first responders. Conversely, Southwick et al. (2014) recognized that fostering competency-based models, interventions, and teaching tools and methods enhances resiliency skills in strength-based inclusion, promoting growth and tolerance to distress. Exposure effects and return to homeostatic functioning are a social concern and adaptive coping following the COVID-19 pandemic for responders to identify symptomology to return to pre-crisis functioning in all areas of their lives (Carbajal et al., 2022; Greene et al., 2021; Matto & Sullivan, 2021; Pink et al., 2021). For years, researchers have debated the definition of resilience, as many of them convened at a plenary meeting of the International Society for Traumatic Stress to discuss multidisciplinary perspectives on the determinants and characteristics of resiliency factors (Southwick et al., 2014). The purpose of the meeting is to understand resiliency as a multifaceted approach, operationalization, as opposed to a binary view identifying resilience as a process, outcome, or trait, such as the ability to recover or withstand stressors; as well as fostering psychological coping mechanisms and the ability to persist in a psychospiritual homeostasis post-crisis exposure (Holland-Winkler et al., 2023). The unique understanding of the first-responding culture, which is

essential for identifying and operationalizing efficacy in posttraumatic growth and self-regulation, comes from the responders themselves.

A qualitative approach to first responders was necessary as this population is often unwilling and guarded in allowing themselves to be vulnerable on a personal level regarding their professional stressors, emotional responses, and authentic responses to the events, experiences, and personal views to avoid appearing weak, vulnerable, or unable to handle their job (Kirschman, 2018), similar to the constructs of military culture (Henderson et al., 2016). Researchers have conducted quantitative studies on veterans and first responders in the United States, and numerous qualitative studies in other countries have explored the creation of theoretical models and approaches to resilience training and postcrisis intervention.

A phenomenological study on U.S. first responders provides invaluable insight into understanding and conceptualizing the critical incident stressors phenomenon and the resiliency factors within this population. Unger (2003) stated that the qualitative approach to resiliency enables researchers to intellectualize the resiliency constraints, thereby addressing shortcomings in processes for specific populations that are protective yet relevant to the participants' lived experiences. My phenomenological study has the potential to enhance or complement past, current, and future quantitative research, as researchers have found that negative risk factors and positive life events are mediated by the events of the participant's identity (see Rank, 1992; Thoits, 1995; Ungar, 2003). In other words, the approach and understanding of growth and resiliency processes are

subjective. Understanding the population and their experiences contributes to the research by filling in the necessary gaps.

Role of the Researcher

The role of the researcher is to be present with the research participants, understanding the importance and responsibility of reporting on the lived experiences of participants from an identified population (Ravitch & Carl, 2021). Qualitative inquiry research development directly indicates the researcher's ability to design, align, and report on the phenomenon of interest (Burkholder et al., 2020). The researchers' awareness of their paradigm and experiences is paramount when conducting qualitative research, as the researcher's identity, life experiences, positionality, and internal and external aspects influence the way the researcher processes meaning and facilitates the research project, taking into account researcher bias awareness (Ravitch & Carl, 2021). Burkholder et al. (2020) describe the researcher's role as being responsible for organizing and analyzing data after it has been gathered, while controlling for bias. Metacognitive awareness (Fleur et al., 2021) throughout the research process enables the minimization of potential bias when analyzing data. Furthermore, insights from the essence of the first responders' experiences informed ideas and insight into the social science gap.

I am a combat veteran, crisis responder for deaths in the line of duty, leader for critical incident debriefs for multiple first responding agencies following a critical incident, and trauma counselor for emergency responders, veterans, and postcrisis workers. Therefore, I have a personal relationship with law enforcement officers and firefighters as a group; however, I did not have a personal relationship with any of the

individual participants. The statement of my role as a researcher and advocate for the participant group enables me to be aware of data analysis and to consider the potential for researcher bias. The familiarity of my work, the therapy dog accompanying me during crisis response, and my veteran status can create an environment of similarity, comfort, and willingness for firefighters and law enforcement officers to be open, authentic, and receptive to sharing their experiences. I journaled my thoughts, assumptions, and subjective experiences to mitigate the potential for researcher bias and ensure that the participants' perspectives and subjective experiences are accurately and transparently represented.

The goal is to recruit participants through social media, Facebook groups, and email invitations to individuals without a prior relationship, thereby avoiding potential bias or conflicts of interest. Lastly, for the sake of consistency and universality for all participants, an interview guide served as a reference to clarify the voluntary nature of the study, obtain informed consent, and provide a list of open-ended questions. It also ensured that participants were aware that they could stop the interview at any time they chose.

Methodology

I aimed to understand the lived experiences of first responders' post-traumatic growth and resilience with exposure to a critical incident in the line of duty. At the same time, it was essential to identify and conceptualize the processes that enhance resiliency amongst the population. I used convenience sampling, a form of purposive sampling, as the participants have a specific characteristic of interest in this research proposal. Each

participant experienced a critical incident while serving in the line of duty. A phenomenon's data, lived experiences, interpretations, and assumptions are best suited to a purposive sample (Onwuegbuzie & Collins, 2007). After gaining approval from the Walden University Institutional Review Board (IRB), with approval number 03-24-25-1085134, to conduct semistructured, in-depth interviews with participants who met the study criteria, I scheduled and conducted the interviews.

Participant Selection Logic

The population selected for this study consists of first responders who were involved in or exposed to a critical incident while on duty. The sample size for this study was eight participants. There is no specific minimum number that is universally considered appropriate for qualitative research; however, a study's validity emphasizes the importance of credibility, transferability, dependability, confirmability, and adherence to research design requirements (Creswell & Creswell, 2018; Ravitch & Carl, 2021). Burkholder et al. (2020) described saturation as meeting two criteria: first, no added information patterns emerge, and second, no phenomena are left unexplained, ensuring the data collection has effectively answered the research question(s). Eight participants were interviewed for this study. Creswell and Creswell (2018) stated that researchers can adjust the number of participants during a research project based on what emerges from the interviews, in line with data saturation. This phenomenological qualitative study aimed to understand the lived experiences of first responders and their exposure to critical incidents while in the line of duty. As the researcher, I knew the sample's diversification depended on the participants.

Purposive sampling was used to select participants for this study. The criteria for the participants included (a) a law enforcement officer, firefighter, or emergency service personnel currently still active in service, (b) self-reporting to have been exposed to a critical incident while in the line of duty, and (c) over the age of 25. The 25-year-old age limit was purposeful for life experience and paradigm development, considering brain maturation specific to the prefrontal cortex (see Arain et al., 2013). Participant recruitment was via a Facebook invitation posted on social media. Furthermore, I posted a flyer on other social media platforms. I asked others to share the flyer with anyone who fits the participant criteria and may be willing to participate in the study. I used snowball sampling. The flyer included the participant's criteria, the nature of the study, a link to potential screen interviewees, and instructions on contacting the researcher for pre-screening questions. After meeting the prescreening requirements and determining the participants' interests, I emailed each participant a copy of the informed consent. When I obtained the informed consent form, I sent out two to three dates and times to meet via Zoom, with password protection, to schedule an interview that would last 1-2 hours, if needed. The interviews were audio-recorded for data collection and transcription using the Zoom transcription function.

Instrumentation

The semistructured interview questions (see Appendix) I developed were open-ended questions designed to elicit study participants' perceptions of critical incidents and resiliency following such incidents while in the line of duty. Rubin and Rubin (2012) concluded that semistructured interviews facilitate the conceptualization of an

individual's perceptions and beliefs. I developed 16 interview questions that focused on critical incident resiliency, coping processes, beliefs, stigmas, and barriers to posttraumatic growth. For the validity of the content, the interview process listed the questions sequentially and asked participants the same questions in the same order throughout the interviews.

The semi-structured interviews were conducted via Zoom conferencing for data collection. My goal with the interviews was to answer the research questions, focus on the research problem, and capture the lived experiences and essence of the cultural implications. Interviews began with a reminder that the participant could stop or pause during the interview at any time. Due to the subject's sensitivity and the need for rapport building with the population, anonymity and unconditional positive regard were essential at the start of the interview to ensure the participant's protection from potential harm (Kang et al., 2023). Interview questions began with information gathering to facilitate the participant's interaction with the interviewer.

The interview questions for the semistructured interview were specific to posttraumatic growth, resiliency, coping, and critical incident experiences. Before beginning the interview, participants were informed that the interview would be audio recorded, allowing me to analyze the data and capture the perceptions, paradigms, and essence of the first responders' experiences with critical incident exposure and the factors that promote post-traumatic growth and resilience.

Procedures for Recruitment, Participation, and Data Collection

The approach to research and procedures for participation consisted of posting a flyer on social media sites, such as Facebook and Instagram. The contact information, the nature of the study, and a link to prescreening questions were included on the flyer. Potential participants completed a prescreening questionnaire to confirm that each met the study's inclusion criteria. Upon meeting the requirements and establishing the participant's interest in the study, I emailed the informed consent form to them. The informed consent form sent to the study participants included details about the study's benefits and risks. Once each participant received the consent via email, "I consent," I scheduled a meeting time by providing 2-3 potential dates and times for them to choose at their convenience. After an agreed-upon time and day, an invitation to a password-protected Zoom was sent to the participant. A reminder of the interview was sent via email 48 hours and one hour in advance, allowing the participant to update the time of the interview or ensure they had a distraction-free space where they could talk freely.

During the interview, I reminded the participants that participation was voluntary and that they could stop the interview at any time. I also reminded them that the interview would be audio-recorded for later data analysis and offered to answer any questions they might have before the interview began. To ensure the trust and rapport of the participants, I requested permission to record the interview before starting.

After the interview, I thanked them for their time, willingness, and vulnerability. I also reminded each participant that I provided them with a list of counseling and mental health resources on the consent form when they consented to participate. Several free

support groups, resources, and educational materials are available through the National Alliance on Mental Illness (NAMI) and local resources, including the South Carolina First Responder Assistance and Support Team (SC FAST), the South Carolina Law Enforcement Assistance Program, and Provident insurance companies for line-of-duty incidents.

Participants were informed that a summary would be sent to ensure accuracy. For the transcription of the interviews, I used Otter.ai, a service Zoom has integrated directly. For assurance and validity, I also reviewed the transcription against the audio and edited it for accuracy, ensuring verbatim accuracy. I sent verbatim transcripts to each participant for accuracy, and each was returned, with no changes. A dissertation journal was kept throughout the research data-gathering process, including contacts via phone, email, or text interactions with participants from the time of consent acquisition.

Data Analysis Plan

For this phenomenological research study, I employed Moustakas's seven-step approach to data analysis (1994) to identify themes and categories within the participant data. Qualitative research analyzes patterns, causes, frequencies, processes, and magnitudes to begin interpreting the data collected (Babbie, 2017). To capture the iterative nature of qualitative research, I used a multi-level approach to analysis as it is essential to identify the phenomenon's themes and categories (Creswell & Creswell, 2018; Patton, 2015). The analysis and study of the data were ongoing, and the iterative approach allowed for an audit trail as the data analysis was explored in depth (Ritchie & Lewis, 2003; Smith & Firth, 2011). The steps this researcher followed to deconstruct the

phenomenological data were Moustakas's steps for transcendental phenomenology data analysis.

The data analysis steps Moustakas (1994) uses include:

- Listing and grouping relevant experiences (Horizontalization).
- Elimination and reduction are used to remove irrelevant data to determine pertinent aspects of the experience (invariant constituents).
 - Core theme creation is achieved through categorization, where themeatization categories are formed by clustering invariant constituents.
 - The final identification of themes and invariant constituents is conducted to ensure explicit compatibility and expression throughout the entire record.
 - Use essential data and verbatim examples (Individual textual descriptions) to develop descriptions of each participant's experiences.
 - Individual structural descriptions include other aspects of the experience that rely on individual intellectual descriptions.
 - The synthesis of structural descriptions and textual descriptions for each participant.
 - Finally, a summary or description of the common meanings and essence of the participants' expressions is provided. The interviews were audio-recorded via Zoom, and I used Otter AI to transcribe recordings and identify themes by hand-coding. I analyzed this data multiple times using the above process to identify themes. No discrepancies were found in any case.

Issues of Trustworthiness

Trustworthiness is the measure by which the reader has confidence in the data collection, sources, and the researcher's ability to answer the research question. Ravitch and Carl (2021) discuss terms such as quality and rigor in conjunction with trustworthiness and validity to present the participants' experiences, perspectives, and contextualization of their lives. The validity constructs in qualitative research include credibility, confirmability, dependability, and transferability (Ravitch & Carl, 2021; Shenton, 2004). To ensure the investigator is aware of their metacognitive state, active listening is essential for trustworthiness (Babbie, 2017); therefore, I maintained a research journal to ensure the validity of the research. Rubin and Rubin (2012) noted that active listening has several key characteristics, including the observation of nonverbal cues such as body language, facial expressions, and psychomotor movements. I was observant and aware of the participants' nonverbal cues, facial expressions, and body language to maintain active listening.

Credibility in qualitative analysis refers to the researcher's ability to identify patterns that are not easily explained and account for complexities such as research design, instruments, and data (Guba, 1981; Ravitch & Carl, 2021). To ensure credibility, I maintained an awareness of the complexity of phenomenology by referencing Moustakas' steps to research analysis. Patton (2015) encouraged researchers to maintain an audit trail to aid in vetting the findings for the reader. To ensure credibility, I employed various strategies, including reflexivity, triangulation, peer debriefing, and member checking, to verify the accuracy of the interpretation and presentation of the participants' experiences

(Burkholder et al., 2020; Creswell & Creswell, 2018; Ravitch & Carl, 2021). I employed member checking for this research project by sharing the study results with the participants to verify the representation of their experiences, as Saldana (2021) recommended to maintain credibility.

The strategy I used to ensure trustworthiness is reflexivity. Reflexivity requires the researcher to maintain field notes, analyze personal biases, memos, and responses to the research, and critically analyze them throughout the study process (Burkholder et al., 2020; Schwandt, 2015). Awareness of bias and the researcher's reaction to the process aids the study's credibility. To do this, I used note-taking as a journal to monitor and maintain this researcher's metacognitive process. In qualitative research, transferability for generalization of applicability is not an objective; instead, Ravitch and Carl (2021) theorized that the goal is to capture specific content accounts of the participants' experiences. Some methods of transferability include detailed descriptions of data within the content or thick descriptions (Ravitch & Carl, 2021). Burkholder et al. (2020) and Ravitch and Carl (2021) held that the cultural context and setting of the participant's thick description are essential for the accuracy of the population and the study's phenomenon.

Dependability is another core area for ensuring the accuracy and trustworthiness of the research, which involves data stability, also known as reliability (Ravitch & Carl, 2021). I documented the research's data collection, analysis, and reporting to maintain data stability. The consistency of findings and documentation of data collection, analysis, and reporting of research results are all intentional processes practiced to ensure dependability.

Confirmability, also known as objectivity, is a process that enables qualitative researchers to acknowledge the biases and paradigms they hold by employing methods such as reflexivity processes, triangulation processes, and the use of external audits (Miles et al., 2020; Ravitch & Carl, 2021). I maintained study documentation from data collection through reporting to maximize the transparency and trustworthiness of this research. I kept a research journal to document my thoughts, metacognitive assumptions, and automatic thoughts for insight and bias awareness.

Ethical Procedures

Considerations of the participants are paramount when researching to ensure their treatment is managed correctly and any ethical concerns are addressed. The most important responsibility of the researcher is to respect and acknowledge the desires, rights, needs, and values of the participant, recognizing that qualitative methods can be particularly sensitive when addressing sensitive questions and experiences (Creswell & Creswell, 2018; Spradley, 1980). To ethically conduct studies involving human participants, approval from the Walden University Institutional Review Board (IRB), with approval number 03-24-25-1085134, is required prior to data collection, analysis, and presentation of the results. I did not begin the recruiting process or data collection for this study until I received the IRB approval number 03-24-25-1085134.

Another ethical consideration and responsibility of the researcher was to inform the participants of the study, including its purpose, data collection procedures, and the ethical guidelines, while also maintaining confidentiality. The recruitment flyer for the study included the study's objectives, ethical procedures, confidentiality, and data

collection methods. Before data collection, the participants signed an informed consent form to participate. Once I reviewed the participant criteria and confirmed the study's requirements, the individual agreed to participate and received a list of resources specific to their population. The participant was informed that they could stop the interview at any time, refuse to answer questions, and respond at their discretion, to ensure their safety and maintain rapport.

This study aimed to identify resiliency and posttraumatic growth factors and processes to inform preventative skills and cultural and trauma-sensitive interventions. Additionally, this study aimed to minimize turnover among first responders, manage mental health issues, raise awareness, and create a movement to prepare first responders mentally and emotionally for the effects and cumulative stressors of their jobs. First responder populations are often stigmatized and dehumanized by the public and within the paradigm of the first-responding cultural norms. Participants were minimally at risk as they shared their experiences on a sensitive topic. I assured the participants that they understood the nature of confidentiality, and their Zoom interviews were locked and password-protected. The phenomenon of interest may have caused the study participants discomfort or distress during the interview; however, all participants reported being in good spirits at the conclusion of the interviews. To mitigate this, I provided a list of available resources to see if they were adversely affected.

The data was collected via Zoom audio recording, and the interviews lasted an hour. The research data collection overview protocol was as follows:

Demographic survey/ participant screening (2 -3 minutes).

Sign the informed consent to agree to participate in the study.

Participated in the interview via Zoom; password protection was audio recorded only (approximately one hour).

Interview summary review to address changes or additional thoughts (15-20 min).

The transcripts and audio recordings are stored on my professional computer, which requires a password for access. All documents will be kept in a locked filing cabinet in my home office, and the files on my laptop are password-encrypted.

Furthermore, I will maintain all records of the study results for five years following the publication of my dissertation, after which they will be destroyed in accordance with secure electronic shredding protocols and HIPAA guidelines.

Summary

In this chapter, the rationale for using a phenomenological research design is discussed, along with the justification for the chosen design and my role as the researcher in this study. Eight participants were interviewed for this study. I reached data saturation after completing eight participant interviews and analyzing the results. I concluded that data collection was done through semi-structured interviews with open-ended questions. The data collected was organized by hand. The results are presented in Chapter 4, followed by a discussion in Chapter 5.

Chapter 4: Results

In this phenomenological study, I explored resilience factors in first responders before, during, and after exposure to a critical incident. For this study, a critical incident was operationalized as any event experienced by a first responder while serving in the line of duty, causing the responder to experience powerful reactions that interfered with their ability to function both on and off duty. Critical incidents are subjective to the person experiencing the incident (Skryabina et al., 2021); however, some common examples are natural disasters such as floods, fires, hurricanes, or terrorist attacks, mass casualty incident such as a school shooting, motor vehicle collision, abduction, sex trafficking, rape, loss of interdepartmental life or limb, exposure to human suffering, abuse, neglect, moral injury, and the relationship with the patient, victim or citizen. The following research questions were examined in my study: (a) What are the lived experiences of first responders who experience a critical incident while in the line of duty? and (b) What processes or factors enhance posttraumatic growth and resiliency in first responders following a critical incident while in the line of duty? Eight participants from the United States East Coast were selected for this study to share their lived experiences of critical incident exposure and the factors that promote posttraumatic growth, resilience, and processes while serving in the line of duty.

Moustakas' (1994) seven steps to deconstruct phenomenological data are how I examined the qualitative data collected for this study. Steps for deconstruction included horizontalization, reduction, elimination, categorization, and thematization, followed by the final identification of invariant constituents and themes, individual textual

descriptions, individual structural descriptions, and synthesizing the structural and textual descriptions for each participant. To complete the deconstruction of the data collected, although not listed as part of the data process analysis, a composite description of the shared meanings and essence of the participants' experiences (Moustakas, 1994). I established descriptive statements, meanings, and themes, as listed with participants' responses, within this chapter. Additional information included in this chapter is the study's settings, participants' demographics, data collection, and analysis, evidence of trustworthiness, and the results collected.

Setting

I conducted the interviews for this study in a private counseling office with the door closed. A sound machine was used in the corridor to maintain privacy, accompanied by my use of headphones to ensure participant confidentiality. The participants in the study each chose a distraction-free environment to share their experiences that offered comfort and privacy. I conducted interviews with participants in a secure Zoom session. I informed participants that the session would be audio-recorded exclusively, with explicit notification at the start and end of the recording. Four participants worked in their private offices, while the others conducted their interviews from home. There were minimal distractions during the interviews, with the only notable exception being a participant who needed to plug in his laptop because the battery was running low. Apart from the one charging distraction, there were no additional distractions.

Demographics

The study involved eight first responders, all of whom were males, and one female, with a history of critical incident exposure, who were over 25 years of age and still serving in a first responder capacity. Once I was assured that the participants met the study's criteria, each participant completed a prescreening questionnaire before any further communication took place. The eight participants are currently serving on the East Coast of the United States. All participants identified critical incidents and served in a first-response capacity for eight years or more. Numbers have been assigned to protect their privacy. The participants were labeled P1 through P8, corresponding to their interview dates (see Table 1).

Table 1*Participant Interviews*

| Participant | Date of interview | Interview duration | Critical incident type | Years in service |
|-------------|-------------------|--------------------|---|--|
| P1 | 04/2025 | 34 min | Airplane crash mass casualty | 8 years as a firefighter paramedic |
| P2 | 04/2025 | 39 min | Airplane mass casualty | 15 years firefighter-paramedic |
| P3 | 04/2025 | 24 min | A child shot herself, and peds drowned, etc. | 38 Years Firefighter |
| P4 | 04/2025 | 29 min | BF killed in LOD, mass shootings, and fires. | 21 years in Fire and EMS |
| P5 | 04/2025 | 31 min | MVC children ejected, DBS of son (1 st responder). | 38 years firefighter |
| P6 | 04/2025 | 47 min | Head-on collision, multiple LODD | 44years as a first responder, EMS/Fire |
| P7 | 04/2025 | 24 min | His captain DBS, LOD death | 25 years firefighter |
| P8 | 04/2025 | 28 min | Multiple lines of duty deaths of two LE officers | 25 years EMT and Paramedic (16 years) |

Participants were asked to share the critical incidents or incidents that they had experienced and were informed that the comfort level of the participant was a priority; therefore, details of their experience were at their discretion. Participants had the opportunity to review and confirm their responses after I summarized them for each

question, clarifying whether any acronyms were used in their answers to ensure the most accurate representation of their thoughts. The trustworthiness of the results is crucial for ensuring the accuracy of the participants' experiences (Saldana, 2021); therefore, member checking is one of the methods I used to create and maintain trust with the participants.

Data Collection

I applied to Walden University's IRB to initiate this study. To receive approval, I updated and submitted a copy of the prescreening questionnaire, added a list of the available resources to the consent form, and updated the flyer to ensure the proposal language was consistent with the consent form and the participant flyer. After making the requested changes and updates, I received the IRB approval number for this study: 03-24-25-1085134, allowing me to begin data collection. Recruitment for this study was conducted by emailing local law enforcement officers and firefighter personnel, and by posting a recruitment flyer on social media platforms such as Facebook and Instagram.

Thirteen participants completed the participant criterion questionnaire through Survey Monkey; nine responded and signed the consent form, " I consent." Participants who consented received emails to schedule their interview times; the ninth participant never responded after follow-up, and the study reached saturation. There were some exchanges of emails between several participants and me because of their varying schedules; otherwise, the process of setting up and confirming dates and times was smooth.

I used an interview protocol for this study; therefore, each interview began with an introduction and assurance that the interview was private and that they could pause or

stop the interview at any time. I reiterate to each participant that comfort, mental, and psychological safety were paramount. The semistructured interviews consisted of 16 questions, and each participant was asked the same 16 questions; additionally, some of the questions posed included clarifying or follow-up questions to ensure accuracy. On average, the participants were asked a total of 20 questions. The interview lengths varied among the participants (see Table 1), ranging from 24 to 47 minutes. At the end of each interview, I thanked the participants for taking the time to participate in the study. Moreover, they were eager to learn of the results and hopeful for change in their population. Upon completing the seventh interview, no additional information was gathered; therefore, data saturation was deemed to have been achieved. However, there were only male participants, and a female participant was willing and met the criteria; consequently, I conducted the eighth interview. As no new data were obtained following that investigation, I ended the recruitment for my study in consultation with my committee.

Otter.ai was used to transcribe the interviews, using the audio recordings obtained during the interviews, which each participant was informed of and gave permission for. After the interview, I downloaded the audio recording and labeled it with a codename, then deleted it from the Zoom platform. Next, I listened to each audio recording and verified the transcription verbatim by comparing the audio to the text. Each participant has a separate file labeled with their consent forms, audio recording, and verbatim, verified transcripts. No one else can access my laptop; therefore, only I can access any

files or folders related to this study. I did not deviate from the data collection process presented in Chapter 3.

Data Analysis

Semistructured interviews were conducted via a password-protected Zoom session to collect data from the participants. Otter AI was used to audio-record the interview and transcribe it. I then listened to each audio recording to verify the verbatim accuracy of each of the eight interviews. During each interview, I also took notes on the participants' mood, tone, and nonverbal expressions. I also kept notes in my research journal to maintain awareness of research bias. As I conducted the new interview, I made notes of similar phrases or words. I used Word, Excel, and hand coding to identify groups and themes among the data.

After completing all the interviews, transcriptions were verified verbatim for accuracy. I began my analysis as outlined in Chapter 3 using Moustakas' (1994) steps for data analysis. Horizontalization is the first step in this data analysis process, which involves reading each interview and highlighting frequently used words and phrases related to the study's purpose and theoretical framework (see Table 2).

Table 2*Themes and Subthemes*

| Themes | Subthemes |
|---|--|
| Critical incident exposure effects | Interpretation and subjectivity Immediate impact Self-regulation difficulties |
| Stressors congruent to vicarious trauma | Autonomic nervous system imbalance Communication disconnection/unfamiliarity with needs Discrepancy in psychological impact awareness /resiliency skills |
| Protective factors for adversity resilience | Growth mindset/mindfulness Culturally competent clinicians/counselors Peer support/leadership organizational support for change |
| Cultural and social stressors | Stigma/dehumanization (perception) Fear of inadequacy/weakness perception Personal challenges outside of work |

Evidence of Trustworthiness**Credibility**

To ensure the credibility of this study, I employed member checking, as recommended by Saldana (2021), to verify that the participants' experiences were accurately represented in their responses during the interviews and in the reflexivity. The interviews were transcribed verbatim following the interview process, and each participant received their interview summary for accuracy, clarity, and any necessary additions, as deemed by the participant. The participants all returned the interview transcripts with no changes, except for one instance where a misspelling of a town's name was clarified; however, this did not alter or change the essence of the responders'

experiences. Ravitch and Carl (2021) encouraged acknowledging reflexivity, or researcher bias, to establish and maintain credibility. To maintain awareness of researcher bias, a journal was kept and used throughout the research process to ensure that my paradigm and thoughts did not interfere with the analysis and interpretation of the essence of the participants' experiences.

Transferability

Transferability is conceptualized as the extension of the findings to the study sample, which can be generalized to the study's population of interest (Burkholder et al., 2020). Semistructured interviews were employed in this study to establish transferability through detailed descriptions of the participants' experiences. According to Ravitch and Carl (2021), the qualitative goal for transferability is to ensure that context-specific descriptions accurately capture the essence of the phenomenon. Details of first responders' resilience related to critical incident exposure were shared to describe the participants' lived experiences. The human experience is subjective; however, there are several similarities regarding the phenomenon of study within the participants' experiences.

Dependability

Dependability in qualitative research ensures that the evidence collected aligns with the research question and that other researchers can replicate the study (Ravitch & Carl, 2021). The research process was meticulously documented to ensure dependability, particularly in data collection and data analysis, for accurate reporting of the findings (Burkholder et al., 2020). For the semistructured interviews, an interview protocol was

used to ensure that each participant was asked the same questions in the same manner and that their responses were documented consistently. Following the interviews, the transcripts were reviewed for verbatim transcription, and the hand notes were taken throughout the interview process. As outlined in the study, I used Moustakas's steps for data analysis.

Confirmability

Research subjectivity is at the center of confidentiality in qualitative studies, particularly when verifiable procedures are employed (Burkholder et al., 2020). The study's credibility and the minimization of researcher bias are achieved when other researchers can achieve the same conclusions. I asked participants the same questions and sent them the transcripts after conducting a verbatim check for dependability to achieve study confirmability (see Ravitch & Carl, 2021). Furthermore, I was aware of the potential for research bias, so I utilized the research journal and employed a metacognitive approach to data analysis, ensuring that the labeling of the participants' experiences was accurately captured.

Results

I examined the lived experiences of first responders' resilience in the face of critical incident exposure while on duty. The research questions guiding this study were as follows: (a) What are the lived experiences of first responders who exhibit resilience following a critical incident while on duty? and (b) What processes enhance resilience factors in first responders following critical incident exposure while they are on duty? Following data collection and analysis, I identified four themes and several subthemes.

Critical incidents and increased trauma exposure, stressors, and challenges to first responders' mental health as influenced by the profession, coping strategies and behaviors, and cultural stigma and norms for first responders, as well as several subthemes.

Theme 1: Critical Incident Exposure Effects

The theme of critical incident exposure effects on adverse trauma exposure is prevalent, as the phenomenon of interest is the resilience of first responders following a critical incident exposure while in the line of duty. Each participant reported being exposed to multiple incidents while in the line of duty, and the longer the time spent serving in a first-responder organization, the greater the exposure to these incidents. The theme and subthemes of interpretation and subjectivity, exposure impact on the responder, and vicarious exposure and/or collective experience focus on the responder's understanding of the traumatic exposure to critical incidents, as well as capturing the essence of the perceptions of critical incidents based on subjectivity, current life events, and serving in the area in which you live in that community.

Subtheme 1: Interpretation and Subjectivity

All eight participants interviewed expressed that the critical incident phenomenon itself is subjective and interpreted considering the scene circumstances and the current paradigm of the responder. Critical incidents affect different individuals differently at certain times and milestones. P7 stated, "The one thing that they all share is that I was emotionally overwhelmed." P1 stated, "That the nature of it was very grotesque." P2 said, "I think a critical incident is something that I can relate to, like it's something

relatable in a sense, that kind of messes with me a little more than just a normal bread and butter call.” P3 explained, “Everybody always says it's going to be a kid or a family member that going to make it a critical incident, but it can change over your career based on what is important to you at the time.” P4 reported, “We had a mass shooting a couple days ago, and it’s definitely out of the norm and involved kids, things like that are critical.” P5 stated, “Is one that involves that out of the ordinary, call that just overwhelms the senses, overwhelms your experience, your feelings, everything, a child death, a horrific accident of fire, involving death, though, to me, those are critical incidents.” P6 stated:

I honestly think critical incidents differ for all of us, because what may be a critical incident for me might not be for another first responder, but a critical incident for me is one that I guess, after, a couple sleep cycles, I still can’t quite shake it.

Subtheme 2: Immediate Impact

The immediate impact, as explained by participants, is based on the life circumstances of the responder and the strategies/skills that were either present or lacking based on the lens of each participant, specific to self-regulation, skills awareness, and proactivity, while considering hindsight bias, regret, and feelings of sensory overload. Following the critical incident exposure, P6 explained, "I wish my mind could forget the things my eyes have seen." P1 stated, "I had a lot of night terrors in the beginning, night terrors and not being able to stay asleep. Now it is falling asleep," Similarly, P2 reported, "I find like the smells are always like something that's always affected me after critical

incidents," as well as "dreams or visions." P3 expressed, "I guess I'm always a little bit more on edge with what's going on around me." At the same time, P5 reiterated the feelings of being overwhelmed, responding with, "The one I think about a lot, it was just totally overwhelming. It was like information overload, and you just kind of revert back to training, and there are parts of that incident that I don't even remember."

The response to the immediate impact for P7 and P8 involved regret or hindsight bias. P7 stated:

Just looking back, like it was, I had a lot of guilt, had a lot of shame, and for a long time, I coped with it exactly the same way I coped with all the trauma from when I was a kid. I just kind of put it in a box and ignored it.

As well as P8 responded, the immediate effect in their experience was replaying the different outcomes. P8 stated, "I'm still replaying it in my mind, wondering about different outcomes, wondering this and that, or it, just the moments of it continue to replay themselves."

Subtheme 3: Self-Regulation Difficulties

Each participant expressed difficulties after exposure to a critical incident, managing their body's regulatory systems, and maintaining homeostasis. P1 experienced challenges being present with friends and family in the days following his exposure, stated, "Being able to disconnect my mind from all I'm thinking about, even when I'm like out with buddies or out with my girlfriend or whatever, not thinking about the incident and being present." Two of the participants referenced anger issues following exposure. P2 explained, "I definitely get a little more short-tempered," and P7 stated, "At

times when my stress level was elevated to the point where the lid came off.” Two participants felt the need to minimize sensory exposure due to exposure to critical incidents. P3 stated, “Just don’t always want to spend as much time out, around, in the public.” P4 held that he avoided the public and stated, “Because most of the people we deal with are not the nicest and best of people.” P5 stated, “I drank a lot and without me realizing it, that I found myself I had to drink to sleep. I had to drink to relax. I had to do that just to try to be me more.” P5 also shared, “I found myself finding more and more hobbies that would try to relieve stress, but nothing really nothing really happened.”

Finally, P6 shared the immediate effects experienced, “I was conscious through most of it. You know, my bell was rung. I know, probably momentarily I might have lost a little bit of consciousness, but overall, I remember very significantly the smells, all the sounds.” P8 reported, “I started care. Did our thing, we did our thing, and at the end, I was just frozen, like once we put him in the trauma bay, and our part was done.”

Theme 2: Vicarious Exposure Distress

The theme of stressors congruent with occupation discusses the stressors specific to first-responder occupations. Each participant has been exposed to adverse circumstances and experiences, specific to this study, a named critical incident. The subthemes are autonomic nervous system imbalance, leadership disconnection from needs, and a discrepancy in awareness of psychological impact and resiliency skills. It is essential to understand that the events and circumstances first responders respond to are a part of their subjective experience, as well as the observation of the traumas experienced by those they serve within their communities and departments.

Subtheme 4: Autonomic Nervous System Imbalance

Many participants report sleep disturbance as an ongoing challenge, not specific to the immediacy of a critical incident, but rather as part of the unpredictability and exposure inherent to the job. P1 stated:

This just looks like a movie scene. It does not look real. The tarp with the bodies does not look real,” and “in the beginning, night terrors and not being able to stay asleep. Now it is falling asleep. I find that I need more stimulus to fall asleep, so like, I will lay in the living room, facing a bright lamp, with the TV on.

P2 expressed:

Like a true mass casualty, where we got, you know, no sleep that night. Then I had a class the day after. And so, yeah, it was just very, very tough to get in the right mindset.” The inability to manage intrusive thoughts and hyperarousal was a typical response, with many participants needing external stimuli or noise to sleep, as nervous system regulation and adaptation were often unmanageable, or they were unaware of how to self-regulate through healthy processes.

P3 stated, “Sleep is like a bad one, I wake up at the slightest noises for the most part, you know, because it’s going to be missed a call, or something else.” The effects of running calls, lights, sirens, and providing care in a high state of activation, and then the abrupt stop, were difficult to manage internal systems, as P4 expressed:

I remember I rode in the back of the ambulance to the hospital, and didn’t even realize that I was covered in blood until I got to the hospital, and that they thought that and my partner were part of the accident. You go through the thing of getting

cleaned up and throwing some scrubs on, throwing your uniform away, and going back to the station and going home.

P5 explained, “We had no idea that we were just layering this stuff on and on and on and carrying it around with us,” also stating, “the way we coped with it was talking about it, joking about it,” using dark humor and avoidance to manage disturbances and dysregulation. Following the death in the line of duty that hospitalized P6, he stated, “I knew he was gone in an instant. And that was a tough time. It was a tough time. It created some hardships.” As P6 was in leadership, following the line of duty death of one of his firefighters, due to previous negative experiences with critical incident management, he implored, “In the wake of losing a firefighter, we have all learned the hard way that your marbles are all going to fall on the ground and you can never pick them all back up again by yourself.”

Finally, many responders shut down and avoid stimuli due to exposure and an inability to regulate the fight-or-flight response, thereby avoiding acknowledgment of their humanity and needs. P8 stated, “I’m the kind of person that when I get frustrated like that, I close up.”

Subtheme 5: Communication Disconnection/Unfamiliarity of Needs

The theme of communication disconnection/unfamiliarity of needs was consistent with the participants' experiences regarding the immediacy of the crew's needs, the awareness of "state" of the crews following critical incidents, and a general knowledge of morale and esprit de corps. P1 stated, "A majority of our setbacks were issues with our leadership, in regard to support and allowing us to do our jobs that night, and then the

political. First time since the incident to actually talk to us about it, it's been just over two months." P2 stated:

They were checking in on us. They gave us some as much time as we needed off. Still, besides that, not much leadership side of it, not much recognition, got a silly computer-printed card from our chief of our fire department in the mail, and that was the extent of any recognition or gratitude for what we did. So that kind of stung a little bit.

A common occurrence within the realm of the occupation is also almost purposeful, as the responder may not want their business or challenges to reach leadership.

P3 explained:

In our department on that side of it, which, you know, like a lot of stuff, we don't want everything to get back to the chief or someone else. So are we going to be as likely to use it? I think some people will because it's easy. It's an easy app to use, but for people that are still leery of the uppers finding out about something that's going on.

There are also times organizations overlook asking the responders experiencing the incident exposure what their needs are, a lot of times their needs are decided for them without their input as P4 stated, "The battalion would come in and send everyone home without an option, for some people, that might work, they may want to go home hug their kids, but for a lot of people, that's it's not what they need," many first responders want to be with their comrades as reiterated by P4 insisted, "They need to be around their coworkers. They need that camaraderie. And we weren't given options." P5 stated, "I

would always work overtime, always looking for extra training, which was usually on your days off, because they wouldn't let you go when you were on duty, it starts harming relationships.” The excitement and the grit often present with this population can be fast-paced to move up as P5 discusses, “I wish there had been someone at the time to just kind of pull the reins in a little bit and say, eagerness is great, but here's what will happen,” an imbalance of work and life priorities. P6 was injured, and there was a disconnect in his fellow responders wanting to take care of him and his family wanting the opportunity to take care of him, causing distress and internal trauma. P6 stated:

That's not to say that there weren't moments that I was shaken, that I was destroyed and distraught. And I mentioned earlier how that trauma with my personal event, you know, caused me to just blurt out, I wish it had been me instead of my partner.”

P7 stated:

I never knew how to reach out to him and say, ‘Hey, dude.’ You know, the whole organization knows this.’ Everybody just kind of recoiled and put him in a corner. And I didn't realize the effect it was having on him until he killed himself.

P8 stated:

My coworkers, a lot of them, tend to get very angry, a frustration type of anger that they don't know what to do or how to help, or they don't understand why this 21-year-old EMT is having a hard time with something they've seen 47 times. Sometimes you just have to remind people where we came from.

Subtheme 6: Discrepancy in Psychological Impact Awareness/Resiliency Skills

The subtheme, discrepancy in psychological impact awareness and the need for resiliency skills, was indicated by each participant, who expressed a desire to know how adverse exposure and collateral effects would affect them. They also expressed interest in awareness of resiliency skills. P1 stated, “I wish I knew how to deal with it and deal with it and prepare a little bit better for it, in regards like in a healthy way,” and P7 stated:

My top five critical incidents that I’ve dealt with in my career, I didn’t have the tools to deal with it, and they’re different. I mean, I was on calls that broke me. Still, everybody else was like, What’s the big deal?

The psychological impact, both on and off the job, created challenges in balancing family life and the job. P4 stated:

Trying to be the person I need to be at home, while still trying to be me and be an officer in the fire department, and trying to find that balance, it just never seemed to work out for a long time.

P2 explained a desire beforehand to have an awareness of the changes and the dysregulation that occurred following specific calls and skills on how to manage the transitions between calls or shifts, and voiced a desire to know:

That’s a normal human response. It’s a healthy response, because we have the job that you know, you get back from the call and it’s just back to everyday work, and it’s sometimes it’s not like that, like, sometimes you need time to process it and understand that it’s gonna take time and it’s okay.

Theme 3: Protective Factors for Adversity Resilience

Protective factors for adversity resilience were prevalent throughout the interviewing process, as responders spoke to the tangible skills and processes that fostered growth, resilience, and a healthy expression of adversity and critical incident exposure. The subthemes are growth mindset/healthy coping, culturally competent clinicians and counselors, peer support/leadership, and organizational support change. The subthemes include their perceptions of the needs and processes that facilitate post-traumatic growth, healthy coping as a first responder following a crisis, and the collateral effects of exposure to adversity.

Subtheme 7: Growth Mindset/Healthy Coping

Many of the participants learned from experience what was helpful in processing and coping with exposure to adversity; some became aware quickly, while others were not as quick to understand that every human being has their limits. P1 stated:

Yeah, I never used to talk to this dude. He's a solid dude. It's just that we never ran into each other on calls. We just never crossed paths, and we still don't cross paths a lot, but now I talk to him three, four times a week.

Following a national incident, this first responder was on a call with a fellow responder. Since the incident became close to this responder, who wouldn't have otherwise crossed paths, he found talking about the incident with those who were there and could relate to be helpful for his recovery, alluding to the trauma bond. P2 stated, "I find myself exercising helps a lot and playing Xbox, as silly as that sounds, something to, you know, get my mind off of things," as well as "Recently, I started going to therapy after that

incident that helped a lot too.” The acknowledgment that active coping and processes to manage the stress of the job, specifically critical incidents and emotionally overwhelming situations, were necessary to return to after the work on scenes is evolving, as P3 stated, “I guess it’s along the same lines that we have to get the job done. “

P3 also states, “I understand you're hurting, but we need to get that job done, and we can deal with it after the fact. We have to get through it before we can deal with it.”

P4 did not practice active healthy coping in the beginning and as a result stated:

I was going down a hole that I should be going down with drinking and tendencies and thoughts that weren't going to end up well for me, and other ways I try to spend as much time away from work when I realize that I'm getting stressed. You know, I use a sick day.

The acknowledgment of work-life balance and the job becoming the primary focus for P5 became a problem at the beginning of his career, as stated above, similarly. P6 expressed, “Having some fun too, you can't be married to the job, 24/7 365,” as a healthy way to approach the job and maintain growth with work-life balance and the demands of the job. The desire to learn more about resilience and tools to manage the exposure and dysregulation was consistent amongst participants, as P7 stated, “One of the things that I've learned is to be really mindful of what I'm feeling and then why I'm feeling it,” and P8 implored, “I wish I would have known more about resiliency, I wish I would have known the level of anger I would encounter. I knew that I would encounter suffering.” The participants acknowledge the need for healthy and helpful coping

strategies for their occupations, both before, during, and after exposure and preventive processes.

Subtheme 8: Culturally Competent Clinicians/Counseling

The first responding culture's complexity is crucial for the protection, post-traumatic growth, and resiliency of participant buy-in to processes, as participants explain their experiences with clinicians and cultural awareness. Six of the eight participants sought mental health counseling, while all have received help in some manner, if not counseling, pastoral care, chaplains, or peer support. P2 stated, "The therapist I see, she was actually there that night. She's a contract with the airport fire department to provide initial response therapy or counseling, so that was beneficial," and P1 reported, "I'm still learning, talking with therapists once, once, twice a week." P3 and P6 did not seek help at the therapeutic level; however, P6 acknowledged:

I never got all the way to clinician level care where I relied heavily. It was most it was most often with two particular pastors, one of which I just have a wonderful relationship with; he is a first responder himself, and I have been on his church doorsteps, and I have been on the pews of his church, just pouring my tears out before him and letting him lead me through ways to cope and to focus."

P4 stated, "I didn't know how to file it away properly. So when I started processing it, it felt so foreign to me, and the emotional release that happened in front of my therapist, that I was not expecting," further explained the helpfulness and relief he felt after moving through his feelings about having feelings.

Further, P5 reported, "The one that I saw for the traumatic experience was my son's suicide. She was very culturally competent. She had already been dealing with law enforcement, really good background dealing with responders and prior military veterans," was critical in helping him through his traumatic experiences. As an assistant chief, P7 due to past experiences at other departments throughout his career learned the value of seeking help and ensuring that resources were trustworthy and explained, "When I started working here, I had a firefighter that was struggling, we did connect them with a resource that generated some trust fairly quickly," this was with a clinician that works primarily with first responders in crisis, P7 was relieved that there was culturally competent help for his responders accessible to them. Need for culturally competent counselors is a continued social need, as P8 specified, "Unfortunately, currently, I do not feel our clinician is confident dealing with first responders. We had an amazing clinician, and the Sheriff's Department hired him full-time."

Subtheme 9: Peer Support/Leadership

Participants described the need for communicative peer support and leadership awareness at the floor level to overcome the disconnect amongst department needs as a risk factor for resilience and morale. P1 explained that, at the beginning, as a first responder, he was given excellent advice. P1 stated, "My first captain was on 911 and talking about things. And it was always encouraged, like, 'Hey, man, like, shits gonna suck. Talk about it.'" Following a mass casualty, P2 stated:

Leadership, that part kind of lacked leadership the night after or the night of the incident, when we got back, they did, because we got back around three, four

o'clock in the morning, they allowed us to either go home right away or stay and just sleep and not have to run any more calls.

P3 expressed the understanding that there are resources and that help is available to him and his department; stated, "I know we have the peer support within the department, and that if you go for help, according to people that have, they will help you get it as much as they can." Some departments have peer support and chaplaincy involvement. At the same time, some departments are still being met with resistance as P4 expressed:

My department's been pretty resistant to a peer support group; it's been a struggle of trying to get them to understand that, hey, you may deal with it this way, but you have employees that are I'm sending to therapy or I'm putting in a padded room, for lack of better words, because they've attempted suicide.

P6 experienced leadership support challenges within their department: "The director at that time made some very brash statements concerning that and told everybody, they just need to get over it and move on."

At the same time, P5 acknowledged a shift and stated, "Very progressive leaders that are picking up on it and do going that extra mile, making sure those services are in place, making sure those mechanisms are in place." While communicating and talking about incidents can be helpful and growth-oriented, P8 stated, "So that's just a lot of talking through that we don't always control the outcome and why we train the way we do, so that our tools are sharp."

Finally, there are still deficits in processing and humanizing one another. P7 expressed, "We're not going to we're not going to spend our time talking about that call we ran because, you know, get over it, move on to the next one, um, or it's supposed to not be a big deal. We are supposed to see stuff like that and be okay with it." The cultural schema and dehumanization of themselves continue to contribute to internalizing and avoiding asking for the help or support needed.

Subtheme 10: Organizational Support for Change

Cultural beliefs and stressors have been barriers to growth and organizational change due to the underlying assumptions and perceptions of responders; however, the experiences of most of the responders in this study express changes to ideas surrounding cultural norms, leading to organizational growth and development of systems and programs to assist and train on the importance of physical and mental health. P1 reported, "I think it has changed a lot, at least, since I've gotten on because they had an Arlington line of duty suicide in 2018." P2, following a mass casualty incident reported, "The support was there. I mean, they we have, we have two counselors on staff that, uh, do police and fire. They were very receptive when I called them the first day after to be able to talk to them. They were able to get me in right away to be able to talk to them, and then I saw them again, and then I they were able to refer me."

Organizations are often competing for resources; however, due to the assumptive implications and underlying stigmas, counselors who may be connected or affiliated with the organization frequently face a barrier to trust when responding to information and getting it back to leadership. P3 stated, "I see that the inner department like having the

inner department counselor. I think it I would, I love the idea of it.” Also, P3 reiterated, “It goes back to if that clinician is connected to the department, they work for the county too.” P4 reported, “I feel like that stigma is changing a lot, at least where I’m at, several groups that I’ve now brought into the department to teach classes.” P5 expressed:

I think we lag far, far behind as an industry very progressive leaders that are picking up on it and do going that extra mile, making sure those services are in place, making sure those mechanisms are in place, and that you got a way to get help to people.

At the same time, P6 stated, “My volunteer station right now, if there’s something major, the Chief is on it right away. The Chief and the Assistant Chief are both good. They understand it. They will pull people together,” and P7 stated, “In my current organization, because of my experience, we deal with things differently; we’ve learned to recognize things and understand that more pressure doesn’t make the situation go away, actually, less pressure does.” P8 described opportunities that have been made available to them, reported, “We’ve done a lot of education with our organization for partners to recognize when something appears to be bothering their partner, because like I said earlier, what might be critical for me may not be for someone else.” Participants report that changes are being made, and the greater the awareness and accessibility to resources, the more opportunities there are for individuals and departments to build resiliency.

Theme 4: Cultural and Social Stressors

According to the participants of this study, the presence of cultural and social stressors continues to affect mental health resiliency and post-traumatic growth. Factors

that continue to contribute to the mental health challenges of first responders as a social problem are relevant in the subthemes: stigma/dehumanization (perception), fear of inadequacy/weakness perception, and personal challenges outside of work.

Subtheme 11: Stigma/Dehumanization (perception)

Ongoing stigma of mental health and having limits continues to contribute to the idea that first responders are to have an endless capacity to absorb vicarious trauma, secondary stressors, and human suffering without limits. Ongoing perceptions of first responders and dehumanizing traits stem from the responders' self-perceptions, the public's perceptions, and the expectations of how first responders are supposed to be. Most study participants discuss shutting down their feelings, needs, and their ability to acknowledge that they are human, not superheroes. P1 stated, "You're gonna shit have calls. Like, just keep powering through. Like, that's what makes you salty. That's what makes it, you know, that's what gives you the badge."

P2 acknowledged the presence of the stigma until his exposure was a part of the stigma belief set. P2 explained, "The stigma is definitely there, especially with men first responders. I was one of them. A year ago, I would have said it's part of the job. That's what we do." At the same time, P3 stated, "That's also one of those that for a long time, upper was under the same assumptions, and they wouldn't want you if you showed the weakness," as a deterrent to reaching out for help. Perceptions of the job were expressed in different forms, as mental perceptions. P4 stated:

It really was hard the way that they processed it because that's, that's the firefighter mentality, if the fire doesn't go out, you throw more firefighters at it,

and you throw more resources at it until it gets better. But unfortunately, that's not how mental health works.

P6 expressed, "Stigma exists, and it's been a barrier for people gaining the help that they need." In contrast, P5's acknowledgment of the need to accept his humanity is expressed:

There's a stigma there that you gotta be tough; if you can't handle it, what's the public going to expect? But we're still just human beings in the end. So that, to me, we put that stigma on ourselves, we put that pressure on ourselves.

P7 stated:

So I went through a couple of incidents that I can think of where I knew I was in trouble. I knew that these were going to haunt me for a long time, and what made those worse was everyone around me pretending like it wasn't a problem when I knew they were affected too, just part of that stigma. We're not going to talk about it. It's a weakness issue.

P7 dehumanized himself because his colleagues around him were dehumanizing, on top of the public perception of first responders, as P8 stated:

General public, I mean, they call us to fix their problem, a lot of it is my own. Well, some of it's my own mind, and being the supervisor, everybody looks to me to have the answer for them. So I get so caught up in taking care of other people. There have been times I forgot to take care of myself," as another common barrier to acknowledging the need for help.

Subtheme 12: Fear of Inadequacy/Weakness Perception

Like and correlated to the stigma is the fear of inadequacy/weakness perception of themselves, colleagues, and leadership, which participants maintain is a cultural stressor that often leads to mental health challenges, substance use, suicide, and family problems for responders and their families. P8 stated:

People think we're larger than life. They think when we're on that ambulance or in our uniform that things don't bother us, that we're in that moment when we respond, that is our job, and we have to put it aside. But after the call, after the incident, we're just as human as the next person. But while I appreciate the way people have changed, how they view first responders, looking at us as though nothing bothers us, can create a problem, because then we create this thought in our head, well, that shouldn't bother us. We should be okay with this. We're the help. We fix things. We can't fix everything, and unfortunately, I've seen a number of times the first thing that breaks is one of us.

Mentality of being weak or being perceived as weak for needing help and having difficulties with the job or a call continues to magnify the idea that the responders has an endless capacity for adversity as evident in the responses of the participants, as follows, P3 stated, "the stigma from people that when you go for help, you're weak, while P4 said:

I thought that if I reached out, I was weak. The job wasn't for me, um, that if I had to reach out and get someone to help me process things, or help me deal with deal

with life, or deal with the calls, then I was a shitty fireman and a bad officer. I couldn't deal with my problems, so how can I deal with anybody else's?

P5 acknowledged:

We've got an element in the fire service now. We call them the salty people, you gotta have the big bushy mustache and the sideburns, and your helmet has to look like it's been melted. There is even an element in the fire service that glorify being killed in the line of duty. I mean that that it is crazy.

P6 stated:

Males, in particular, I believe, perceive it as a weakness to show any signs of something bothering them. So, call it male ego. Call it the fixer attitude. You know, we want to fix everything. So the fixer doesn't need fixing, so to speak. And so I think they hide it. And then that stigma has 40 years ago is evident. It's been evidenced in my career all throughout those early years that's kind of the mindset.

P7 expressed, "This is an organization of alpha males. Like we are supposed to be the strong people." Finally, the knowledge that the help-seeking may get back to leadership, or the department, continues to be a barrier to seeking help. P1 stated:

The TERP team and the two wellness ladies we have, a lot of people went and talked to them. I was weary and did not, because I'm not signing a confidentiality or HIPAA or anything like thing with them. So, I'm like, what? And they're employed by the county, so I'm like, okay, what am I telling you that you're just turning around and telling my boss.

Subtheme 13: Personal Challenges Outside of Work

In support of the humanization of the responders, another common stressor is personal challenges outside of the workplace. P1 stated, "A lot more stress in regards to people outside, they want to know, 'Hey, were you there?' "and P1 went on to explain questions that are often asked, such as 'Were they messed up?'" P2 reported the challenges in relationships and stated:

So, like, she was pretty much green when we first met; So, I initially was very I would get short-tempered after a bad call or something like that with her, and I've gotten better. I don't want to talk about it right now. So that definitely puts a little stress on the personal life, a little bit. It being on my terms when I want to talk about it versus others.

At the same time, P3 stated, "I guess I'm always a little bit more on edge with what's going on around me." P4 shared:

Issues, the critical calls, causing issues at home, and then me withdrawing from home caused stress between my family and my wife and my children, and then just trying to be the person I need to be at home, while still trying to be me and be an officer in the fire department, and trying to find that balance, it just never seemed to work out for a long time.

P5 expressed the disconnect and challenges to family life and being present, stating:

Having been married before and gone through a divorce, I feel like it certainly had an influence on that. I used to be a very angry person, uh, until I received

counseling and did some healing. I think it affected my marriage, in some ways, I think it affected my relationship with my kids.

In addition to the adversity first responders face in serving their communities, significant external stressors also affect first responders, including personal responsibilities such as maintaining a balance between family and work life, and managing finances, as many are underpaid. Often, the financial and a balance of family and individual responsibilities. One of the personal challenges expressed for P6 was a challenge in the beginning trying to navigate parenthood, marriage and finances, P6 stated, "So trying to handle all those school schedules, build the house, complete the house, and we had some hurdles building the house that were very substantial um, financially, we believed we had done the right thing." The presence of past trauma and family challenges was an obstacle for P7, as P7 stated:

Those things started in my childhood and carried through my adulthood, um, physical and emotional and sexual abuse, dealing with my mom's alcoholism up until she died from it, some stressors in my relationship with my wife. So instead of looking to each other for support, we took things out on each other. So that could be that was incredibly stressful, having kids, knowing that I didn't have the emotional tools to give them a better life than I had, at times, knowing that I was making mistakes and still making them as a parent, my wife has muscular dystrophy. She was diagnosed with that about 19 years ago now, so we've dealt with her slow physical decline.

A common protective factor for many responders is working out. The stress of not having an outlet created difficulty for P8. P8 stated, "At one point, when I had a knee injury, they told me I may never run again, and that was actually one of the worst things in my career to deal with, because I didn't know how I would deal with that was my release mechanism."

Composite Description

The participants in this study face challenges and are exposed to adverse critical incidents. For these participants with a history of critical incident exposure while in the line of duty, expressed critical incidents are subjective to the responder and their worldview at the time, often causing dysregulation and affecting responders with hindsight bias, sleep issues, and differential immediate impact. As a result, the occupational stressors included vicarious exposure and autonomic nervous system imbalance, such as sleep issues, nightmares, night terrors, hyperarousal, and difficulty being present. Further stressors, as explained by the participants in this study, include communication barriers and a leadership disconnect.

Protective factors for adversity resilience as recognized and acknowledged by the participants of this study include healthy coping strategies, seeking help, culturally competent counselors, exercising, faith in a higher power, having a balance between work and home, and a desire to have known how to process and cope before the critical incidents to increase their resiliency as well as an awareness of how to acknowledge their own emotions and feelings for processing. Further, the acknowledgment that there is a

shift in organizational awareness in the participants' experiences is evolving, but it is not yet where the industry needs to be.

Additionally, the cultural and social stressors, such as stigma, Dehumanization, fear of weakness perception, and life stress, played a significant role in the participants' experiences of asking for help, acknowledging difficulties, and addressing the mental health challenges they experienced, creating deficits in their resiliency and well-being. The participants in this study shared similar experiences in which critical incident exposure catalyzed their seeking help and adoption of a proactive approach to their well-being. They also found that help from culturally competent counselors catalyzes enhanced, improved resiliency.

Summary

This phenomenological study explored resilience factors in first responders before, during, and after exposure to a critical incident. Participants were recruited via social media posts on Facebook and Instagram. All participants who expressed interest in the study and completed the prescreening questionnaire were sent the Informed Consent Form. Semi-structured interviews were conducted with eight participants via Zoom, with durations ranging from 28 to 47 minutes. After the interviews were transcribed Verbatim, I used Moustakas' steps for data analysis. Four themes and 13 subthemes emerged to understand the lived experiences of first responders' resilience factors before, during, and after exposure to a critical incident. The emerging themes have illuminated the barriers to resilience and helped understand the aspects of resilience before and after exposure to a critical incident. The data indicated that stigma within the culture persists and remains a

risk factor for first responders, as well as a barrier to resilience within the first responder community. Chapter 5 focuses on the interpretation of the findings, limitations of this study, recommendations, implications, and conclusions.

Chapter 5: Discussion, Conclusion, and Recommendations

In this phenomenological study, I explored the experiences of first responders following critical incident exposures and the processes and factors that facilitated coping, post-traumatic growth, and resilience in these individuals, both before and after critical incident exposure. I selected a phenomenological design to understand first responders' experiences with critical incidents, posttraumatic growth, resilience, and coping in their own words. I recruited eight participants through purposive sampling and conducted semi-structured interviews with each participant. The data was analyzed using Moustakas' steps for data analysis.

Analyzing the collected data, I identified four main themes, comprising 13 subthemes, regarding critical incident exposure experiences for first responders and coping and processing strategies that promote posttraumatic growth and resilience. The four main themes were (a) critical incident exposure effects, (b) vicarious exposure distress, (c) protective factors for adversity resilience, and (d) cultural and social stressors. The themes and subthemes were discussed in Chapter 4. In Chapter 5, I discuss the interpretation of the findings and their relationship to the literature reviewed in Chapter 2. Additionally, I discuss the limitations of this study, its recommendations, implications, and conclusions.

Interpretation of Findings

There are many factors contributing to the mental health challenges of first responders following critical incident exposure, including individual experiences of the incident/s, vicarious trauma, distress intolerance, stigma, and cultural and social stressors.

As Masten et al. (2021) identified promotive and protective factors, the resiliency theory enhances resiliency, as Elam and Taku (2022) stated. Resilience is an intrapersonal, independent aspect, in addition to shifting how an individual interacts, relates, and expresses themselves for posttraumatic growth. Identifying processes and enhancing the efficacy of first responders, as Bandura stated (1977), is a promotive factor for resilience.

Previous research has suggested that identifying protective factors (Bevan et al., 2022) promotes posttraumatic growth and resiliency. Occupational stressors specific to the first responding culture due to adverse exposure is prevalent in the social science community specifically suicidal ideation, suicide, unhealthy lifestyle choices, depression, substance abuse, mental illness, and dysregulation of the nervous system (Cheung & Li, 2023; Dent, 2020; Lowery & Cassidy, 2022; Maercker & Augsburger, 2019; Miller, 2022). Distinct groups and subgroups collectively manage resiliency through their respective paradigms or lenses, based on the entity, as explained by Soomro (2024). The insight gained from a group of mechanisms specific to that group is essential to the group's resilience (Soomro). First responders, as a culture, group, and individuals, have cultural implications that affect how they interpret the world, themselves, and others.

As Hallinan et al. (2021) explained, the cultural consequences regarding stigma within the first responding organizations include assuming one is invulnerable to the vicarious exposure of human suffering and bearing witness as an occupational challenge. In addition to the exposure to the pains of humanity and the emotional labor necessary to respond to tragedy, trauma, and disaster, McDonald et al. (2022) researched ways to improve interventions and awareness to help further mediate the effects of posttraumatic

symptoms, as well as Miller (2022) held cognitive strategies, grounding, mindfulness, and the individuals understanding of their paradigm and metacognitive process will improve a responders ability to self-regulate, as opposed to a avoidant, compartmentalizing defense to managing exposures. Although setting aside specific experiences to effectively do your assigned duty is necessary, compartmentalizing results in collateral cumulative effects if not addressed and processed appropriately, contributing to posttraumatic stressors and distress intolerance.

The results of this study showed that all participants maintain that the stigma is still prevalent in the first responding culture, enhancing the dehumanization process as well as the desire to learn skills to strengthen posttraumatic growth and resilience skills. Each participant had exposure to one or more critical incidents, experiencing a disruption in their ability to cope, process, regulate, and verbalize emotions and needs. Furthermore, all participants desired to know methods and skills to cope, manage, and regulate before their career and collateral exposure to adversity.

Interpretation: Theme 1: Critical Incident Exposure Effects

The participants in this study indicated that the effects of critical incident exposure are subjective to the responder experiencing the critical incident, considering their specific experiences and worldview, as well as their life stage at the time of exposure. The subjectivity and effects of exposure confirm the research that suggested the stress reactions of first responders do not fall under one specific phenomenon in the interactions of acute stress and posttraumatic stress; the effects of adversity are individualized and subjective, to the person experiencing or witnessing the event/s (Saar-

Ashkenazy et al., 2024). Key variables, such as relatability to the critical call, pretraining on resiliency techniques, and concepts specific to certain populations, must have tangible conceptual frameworks (Crane et al., 2022). This research specifies key points particular to the first responder and adverse exposure effects. The effects of the exposure were correlated with relatedness, as explained by the participants in this study.

Facilitating healthy mechanisms is essential to the daily functioning of first responders. One specific occurrence, characterized by variability but consistent for each participant, was some level of dysregulation, inability to manage or verbalize emotions, or a conceptualization of the incident immediately following exposure. Further, Conway and Waring (2021) stated the importance of identifying what factors maximize or minimize first responders' resilience to maintain mental and physical resilience due to ongoing trauma exposures. Proving the conditions and the adverse exposure experienced by first responders, the immediate impact includes psychological and physiological effects for enhancing protective factor parameters to minimize risk factors to improve sleep, physical health, and mental health processing times for the enhancement or re-regulation and recovery (Christopher et al., 2024; Romero et al., 2021). As expressed by all eight participants following critical incident exposure, difficulties were noted in self-regulation, sleep, and awareness of emotional impact.

Additionally, the usage of defense mechanisms, in the protection and preservation of resilience, resourcefulness for defensive functioning, management of unconscious responses, such as mediating traumatic exposure effects, by the development of awareness, the opposite of avoidance and compartmentalization, and the metacognitive

approach to posttraumatic growth following an exposure (Di Giuseppe et al., 2021; Miller, 2022). The active facilitation of coping and developing self-efficacy in first responders addresses traits that actively increase resilience and posttraumatic growth (Crane et al., 2022), consequently lowering the number of post-traumatic stress symptoms.

All participants expressed autonomic dysregulation following the exposure to a critical incident, which was present and interrupted functioning, interfering with successful adaptation and coping, inhibiting the responder's daily functions and responsibilities. Porges (2022) discussed the importance of fostering distress tolerance and promoting growth as the feelings of safety and central nervous system regulation emerge internally. Managing the window of tolerance, self-awareness, and psychological hardiness (Mund & Mishra, 2025) is paramount for strength based inclusion for creating a competency based model of resiliency to enhance positive outcomes and to minimize seasons of distress intolerance (Stanley et al., 2018); mindfulness (McDonald et al., 2021) as a protective factor as well as "metacognitive awareness" (Halaj et al., 2024; Miller, 2022) is essential in first responder distress tolerance and efficacy (Carbajal et al., 2022; Greene et al., 2021; Matto & Sullivan, 2021; Pink et al., 2021). Defining and capturing the challenges faced by first responders in managing on-the-job exposure, as well as the processes that promote growth and resilience, is the most effective way to establish distress tolerance and foster posttraumatic growth through strength-based practices, thereby enhancing efficacy and adaptive processes.

Interpretation: Theme 2: Stressors Congruent to Vicarious Exposure

Researchers have stated that first responders are routinely exposed to critical incidents throughout their careers, which can lead to increased burnout, compassion fatigue, and higher rates of mental health symptoms (Ponder et al., 2023). The study's eight participants reported that the occupational stressors associated with their adverse experiences and exposure to critical incidents, including human suffering, disaster response, and cultural/occupational expectations, contributed to their inability to remain regulated. Regulation enables first responders to maintain a connection to themselves, their responsibilities, and their ability to function effectively both at work and at home. Results confirm the need to learn resiliency and coping techniques to improve outcomes and correlate with occupational distress (Romero & Alvar, 2021).

Some participants expressed their inability to cope with and verbalize the effects of exposure to support people due to fears stemming from a need for support, as well as distrust of leadership or organizational structures, confirming Conway and Warings' (2021) finding that factors promoting resilience in firefighters include trust, informal support, and formal support. In other words, identifying their emotions and understanding how their worldview has evolved is necessary to articulate and communicate their needs and the impact of their experiences to entities that foster growth and resilience.

Bandura (2004) advocated for health promotion and illness prevention, highlighting that building self-efficacy helps strengthen resilience. The core of resiliency theory was the concept of self-efficacy and the social cognitive understanding of the mental, behavioral, and environmental factors (Bandura, 1977), the conceptualization and

metacognitive understanding of their experiences (Halaj et al., 2024), and the processes that contribute to the growth and development of skills to create resiliency and to minimize posttraumatic stress symptoms. The interpretation of this study confirmed the findings of Southwick et al. (2014) that the definitions of resilience and the long-term effects of adversity exposure are different among individuals, groups, and organizations.

Further, the human's ability to be resistant and maintain a capacity to grow through traumatic experiences is also known as posttraumatic growth (Zheng & Maercker, 2021). Understanding and promoting the need to acquire skills and processes that foster self-efficacy and identifying the skill sets that encourage growth despite traumatic exposures (Masten et al., 2021). Furthermore, the results of this study contributed to the interpretation of critical incidents, challenges specific to first responders, and the processes that enabled participants to identify needs and grow through their experiences, thereby maximizing their self-efficacy.

In contrast, others internalized the culture's promotion to keep going and did not realize the effects of the stress until a critical circumstance led them to seek help. Schuman et al. (2025) indicated that the first responding population is more likely to experience symptoms of mental health disorders such as depression, sleep disturbance, anxiety, PTSD, suicidality, or substance abuse disorders, consistent with the respondents and experiences of this study's participants. Masten et al. (2021) informed that the identification of processes and strategies promoting posttraumatic growth and resiliency increases the preventative skills and processes to decrease posttraumatic symptomology and increases distress tolerance.

In my study, I confirmed that active, intentional processes and active coping contribute to mental health maintenance and the processing of critical incidents (see Romero & Alvar, 2021), mitigating the long-term effects of adversity exposure experienced by first responders. Some of the identified processes included seeking help from culturally competent counselors, trauma processing, maintaining a relationship with a higher power, engaging in physical activity, and discussing their experiences with peers, which helped individuals cope with the effects of critical incidents and cumulative stress from service in the line of duty.

Sleep disturbances were also congruent with critical incident exposure and the responder's ability to regulate thoughts and emotions. Researchers acknowledge the overlap between resilience and posttraumatic growth to minimize anhedonia as a PTSD risk factor (Acheson et al., 2022), as well as the externalization of behaviors such as emotional dysregulation and dysphoric arousal (Carbajal et al., 2022). Each participant in this study reported dysregulation following a critical incident, not just after the experience, but for several days afterward.

Growing reports and studies confirm the occupational risks for responders and the numerous risk factors associated with the first responding culture; however, there remains a lack of consensus among the well-established evidence to increase protective factors overall at the community and national levels. A few of the participants reported consuming too much alcohol and overworking as a form of avoidance. Miller (2022) explained that challenges are dichotomous as triggers often activate the survival response; therefore, avoiding long term trauma effects and reactivating dysregulation are

essential. In other words, for some responders, compartmentalization is effective, often evolving into avoidance, until the cumulative effects or risk factors become unmanageable, creating difficulties with functioning in one or more aspects of their lives.

In contrast, others over the years developed processes following difficult calls to manage the regulatory challenges of their nervous systems being in constant activation (Crane et al., 2022), contributing to the research of specific groups such as disaster workers, as Ewert and Tessner (2019) suggested the need for further study for first responders and the military, as a culture or group with specific occupational and cultural challenges. Needs for increased psychological resilience, as stated by Joyce et al. (2019), as a protective factor and distress tolerance strategy, are essential in improving resilience, efficacy, and lowering the risks of suicidality amongst responders (Lee et al., 2014; Marshall et al., 2017; Roy et al., 2007). The study's results contributed to identifying the factors that promote growth and coping among the first responding population, the specific challenges following exposure to a critical incident, and culturally particular indicators that may create barriers for this population.

Furthermore, most participants expressed a desire to have a better understanding of how they would be affected at the start of their careers, in order to minimize distress, intolerance, and burnout, and to maintain their ability to remain connected to loved ones. Yuan et al. (2023) argued that mindfulness serves as a resilience-enhancing approach, acting as both a mediator and/or moderator between posttraumatic stress and growth. Participants reported a lack of awareness and presence in the immediacy of the critical incident exposure and had to learn to reconnect with themselves following exposure,

arousal, and dysregulation. These findings confirm Ducar et al.'s (2020) findings that mindful awareness can improve quality of life in first responders, decreasing depression, social impairment, and anxiety, as stated by Stanley et al. (2018), and buffer against suicidality in the firefighting population.

Further asserting the findings that the promotion and evaluation of mindfulness-based resilience programs decrease posttraumatic stress symptoms (Christopher et al., 2018; Hovee et al., 2021), as well as reduce psychological and physiological health risk factors (Medvedev et al., 2021; Westphal et al., 2021). Participants concurred that they became more aware and mindful of processes and how to manage their sleep by being intentional (Fleur et al., 2021), which enhanced their ability to grow and develop their skills following exposure to a critical incident. These findings could encourage awareness among responders to build tools and processes that foster competence, efficacy, and resilience, promoting posttraumatic growth and serving as a mitigating factor for recovery time following a critical incident.

Interpretation: Theme 3: Protective Factors for Adversity Resilience

Participants in this study employed multiple resources and strategies to cope with and manage the effects of critical incident exposure, occupational stressors, and expectations. Six of the eight participants sought mental health counseling, while the remaining two leaned on chaplains and pastors to cope with the adversities and adapt to significant situations and events. There were mixed experiences with clinicians, as well as concerns regarding the awareness and cultural competency of the mental health providers. Participants who collaborated with competent clinicians in addressing the

cultural and occupational stressors of first responders reported higher learning growth and resilience.

Resilience and awareness of processes continue to serve as protective factors, contributing to the development of a growth mindset and the adoption of healthy coping strategies. Alhazmi & Kaufmann (2022) stated that experiences will differ within states of mind and beliefs. The findings of this study promote the efficacy and exploration of metacognitive understanding of the incident's exposures, rather than the incident itself.

This study supports and contributes to the research that not only do contextual factors, such as debriefs and social support, positively impact first responders, but also the personal factors of distress tolerance and perceived wellness (McDonald et al., 2022; Oneil & Kruger, 2022; Skrybina et al., 2021). The findings of this study supported the idea that seeking out resources contributes to participants' awareness, resilience-based skills, and interventions, leading to improved health outcomes and growth following exposure to critical incidents. The findings of Saar-Ashkenazy et al. (2024) indicated that resilience moderated the mediation effects between traumatic stress, buffering the impact of PTSD symptoms and perceived stress, and affected depression and the use of substances to cope following trauma exposure.

All eight participants acknowledged seeking help in various forms and recognized their need for skills and processes to manage the effects of the job and achieve a better work-life balance, which is essential for self-regulation. This included activities such as working out or engaging in physical fitness as a form of coping (Christopher et al., 2024). Resilience mediated PTSD, as stated by (Kim et al., 2018), as well as

relationships and social support, lower PTSD rates with minor impairments and higher resiliency rates in first responders (McDonald et al, 2022; Saito et al., 2022). Study participants confirmed that their relationships with their spouse, spiritual leader, clinician, or colleague were helpful and integral in coping with and managing the challenges and adversities from on-the-job exposure, supporting the findings of Mao et al. (2019). The ability to connect with others safely is a regulatory factor for many responders (O'Toole et al., 2022), as well as having a life outside the job.

Finally, all eight participants expressed the importance of peer support and positive leadership interaction, as well as awareness of needs, which are resources that contribute positively to overcoming the barriers often present within the organizational infrastructure. Risk factors contribute to the challenges of first responders seeking help; however, as stated by Bevan et al. (2022), the responsibility of fostering a collaborative, cooperative culture for growth and employee well-being is at the organizational level confirming that many barriers and challenges as stated in *It is Not the Calls*, (2023) were within the constraints of leadership and feeling safe and supported to show their vulnerability.

Many career participants discuss the changes in culture, stigma, and comfort with seeking help, often attributed to fear or a lack of trust in sharing their vulnerabilities, as well as the still-present challenges of organizational awareness and willingness to foster change. Research on best practices for first responder resilience and the nature of resilience factors reveals a systematic approach to enhancing well-being and resilience to adversity, leading to improved stress management, practical resilience training, and

effective strategies for addressing the effects of occupational stress (Wild et al., 2020). Awareness, effective communication, and buy-in from leadership (middle and upper management), as identified by Conway and Waring (2021), are crucial for formal support in prevention, intervention, and post-traumatic growth, aiming to improve outcomes and enhance metacognitive understanding in this at-risk population.

Miller (2022) discussed the management of trauma responses and stressor exposures to maintain the optimal level of the window of tolerance and ability to maintain homeostasis, further supported by Torgeson (2025), who shared insight on resilience and stated, "resilience relies on recognition." The integration of such programs to improve outcomes is necessary for change and well-being within first-responding agencies (Carlson-Johnson et al., 2020). Culturally competent professionals, teaching, and training first responders to enhance their efficacy and ability to self-regulate promotes first responder well-being and post-traumatic growth (Dell'Osso et al., 2022), while establishing a healthy work-life balance with emotional intelligence and the ability to cognitively and verbally process experiences, will aid in minimizing post-traumatic stressors and distress tolerance.

Interpretation: Theme 4: Cultural and Social Stressors

All participants in this study acknowledge and indicate that there are social and cultural pressures that affect well-being, resiliency, and maintaining balance in their lives, best described as the continuous presence of stigma, fear of inadequacy, judgment, being perceived as weak, as well as the stressors that exist outside of the workplace. This finding aligns with the research of Papazoglou (2023); factors such as stigma, public

scrutiny, staff shortages, inconsistent leadership styles, sleep, and shift work are mental health concerns for first responders, influencing the development of mental health disorders.

Inferences about the first responder being a superhero and the quasi-military structure of many agencies, which emphasize the view that the mission comes first, contribute to the stigmatization of feeling vulnerable, verbalizing vulnerability, and observing the responders around them appear unaffected. All eight participants confirm the presence of stigma, stigma effects, and the assumption before reaching out for help that vulnerability and being affected by incidents are signs of weakness or inadequacy as a responder, specifically the men.

Implications of this study's research confirm the presence of dehumanization among first responders. Denying all or part of one's humanity is a form of dehumanization, as explained by Haslam et al. (2008). Furthermore, the cultural embedding of controlling and denying feelings in first responders is a form of mechanistic dehumanization (Mika-Luda et al., 2023). Additionally, the culture of first responders encourages a machine-like demeanor, stoicism, vigilance, toughness, and shutting down of emotions for the sake of the call (Henderson et al., 2016; Kirschman, 2021; Mika-Lude et al., 2023; Rodriguez et al., 2016). Results from this study confirm findings of the cultural implications and effects specific to first responders as participants described fears of weakness or inadequacy if acknowledging the need for help or acknowledging to others that they were having difficulties or emotions regarding specific calls or experiences; in other words, it was not the feelings they were experiencing but

their interpretations of what their emotions meant about them as responders and their adequacy of being effective at their professions.

Participants in this study explained that the presence of fear perception was not only self-awareness, but also awareness among one another and the public when the presence of their humanity or vulnerability was to surface. Confirming the self-stigma and public stigma associated with asking for help, as well as the negative perception and attitudes of mental disorders, magnifying the presence of mental health symptoms is a sign of failure, weakness, incapability, or incompetence (Cheng et al., 2018; Clement et al., 2015; Conner et al., 2010; Corrigan, 2004; Krakauer et al., 2020). Thus, the continuation of stigmatization, exposure to suffering, pain, tragedy, and secondary trauma as part of the job contributes to the dehumanization process.

Humanization and acknowledgment by first responders are essential for mental health resilience and coping as a promotive factor. Consequently, the humanization of responders at the organizational and community levels may also increase resilience, minimize post-traumatic symptoms, decrease suicidality, and encourage seeking help. Participants in this study had all experienced exposure to one or more critical incidents, including humanization, which was another common stressor. Additionally, they struggled to balance the responsibilities and endeavors outside their job.

All participants had families and responsibilities outside of their station, which created difficulties in achieving a work-life balance, including shift work, family commitments, sleep deprivation, and overall psychological/physical exhaustion (Holland-Winkler et al., 2023). As is evident, understanding the lived experiences of this

study's findings, increasing awareness, and learning the importance of resiliency skills training and coping can potentially improve outcomes and the overall well-being of responders.

Interpretation of Theoretical Framework

This study's findings were also related to the theoretical framework based on resilience theory, as discussed in Chapter 2, which focuses on approaching the discipline as an adaptive process, idea, and practice (Masten et al., 2006; Masten, 2011), informing the delivery blueprint for resilience and posttraumatic growth. Resilience theory guided this study, proposing that adaptation to adversity can be achieved through protective factors and methods, ultimately leading to positive outcomes for the growth, development, and well-being of first responders. This study's focus on first responders' critical incident resolution highlighted the importance of awareness, destigmatization, humanization, organizational support, and culturally competent mental health educators and providers.

Stigma, cultural expectations, and systems dysregulation contributed to the negative impact and mental health symptoms experienced by the participants of this study. The study found that the immediate effect of critical incident exposure has the potential to cause dysregulation, sleep disturbance, emotional overwhelm, and work-life imbalance (Alleaume et al., 2025). Their experiences with dehumanizing themselves (Mika-Lude et al., 2023), lack of support, lack of understanding of the psychological impact the job would have, and a lack of mindfulness influence their distress intolerance.

This study confirms that the manifestation of emotional, spiritual, and psychological characteristics that perpetuate growth are necessary to achieve balance when life stressors and imbalances arise (Makara-Studzińska et al., 2020), including a proactive, intentional understanding of the adverse effects of exposure (Holland-Winkler et al., 2023), shift work, and human suffering. Constructs necessary for achieving positive outcomes and reducing mental health symptoms to mitigate the vulnerabilities of adverse exposure are essential for minimizing the adverse effects of exposure (Holland-Winkler et al., 2023). As responders, the cultural stigma of asking for help and appearing vulnerable, often seen as a sign of weakness, influenced their experiences in reaching out and seeking assistance. Increasing the efficacy and resilience-based skills, such as healthy cognitive, emotional, and behavioral processes, promotes quicker recovery and a faster bounce back for the responder, leading to increased posttraumatic growth and overcoming adverse exposures.

Further, an increase in organizational buy-in and awareness will increase preventive services, and the use of positive psychology to prioritize physical and mental well-being has the potential to aid in the responder learning to self-regulate despite the overexposure, the overworking of the adrenal system, and accepting vulnerability, feelings, and emotions as part of their humanity structure.

Limitations of the Study

Although this study provided insight into how first responders perceive critical incidents and the role of resiliency in their ability to manage adverse exposure, it has limitations. One limitation of this study is that the interviews were conducted via Zoom,

due to the occupation of the population, shift work, and the inability to observe all nonverbal cues, such as body language outside of the face and upper body, which can be challenging to discern in virtual settings. I am a counselor for veterans and first responders, as well as a veteran and a critical incident psychological first aid responder. To mitigate my personal bias, I bracketed my perceptions before, during, and after each interview and followed Moustakas' steps for the data analysis process. A third limitation of this study is that the participants belong to a group that often has a stigmatizing ideology present with first responders, and the participants' openness, while growing within the cultural implications of seeking help, the participants took an interest in research and breaking barriers; however, that may still not be much of the population.

Recommendations

This study examined the perceptions of critical incident resilience and post-traumatic growth factors and processes among first responders. Although this study reached saturation and all eight participants had exposure to critical incidents, the study's population consisted of only one female. The primary concern of this study was the resiliency factors and critical incidents, rather than the specifics of the experiences, as well as the preventive education provided to responders before exposure. Future research can explore first responders' perceptions of dehumanization and its implications on depression, efficacy, and suicidal ideation. Another recommendation for future research is to examine the lived experiences of the family members and spouses of the first responders.

Finally, further research on first responders with adverse childhood experiences and the choice of occupation may lead to a better understanding of stigma, coping, and meaning-making in this population, as well as how the development of humanization, connection, and meaning-making is a promotive factor, rather than the culturally promoted weakness culture or romanticization of being “salty.”

Implications

The results of this study have several implications for social change. The results of this phenomenological study are significant in understanding the essence of the first responders' worldview and perceptions of critical incident exposure and resilience. Findings of this study reveal the remaining presence of stigmatization and the influence of dehumanization, fear of vulnerability, and judgment when seeking help. Intentional awareness and influence on risk factors, as well as the possibility of creating protective factors and implementing preventive mental health strategies that focus on downregulation, efficacy, hardiness, and well-being, will significantly contribute to first responders' post-traumatic growth and resilience. The growing body of research that seeks to understand the intersection of trauma, resilience, first responders, and posttraumatic growth is enhanced and informs further internal and external characteristics and the strategies and circumstances that enhance the person-environment concept.

Practitioners and policy makers may use this information to develop programs and educational interventions that teach a metacognitive approach to prevention, enhancing the first responders efficacy and encouraging self-efficacy, well-being and insight, rather than post-disaster response, understanding the cultural factors to inform

clinicians and support providers on how to approach the cultural implications that are influencing factors throughout the responders' exposures and the longevity of their careers. The findings of this study may enhance the understanding and quality of life for first responders by reducing stigma, fostering a common language, and promoting a growth mindset, ultimately leading to positive social change.

Conclusion

This chapter presents an interpretation of the findings, the study's theoretical framework, study limitations, recommendations, and implications for promoting positive social change. The results of this study found that the perceptions and expectations of the first responding culture inhibited their ability to maintain healthy levels of mental health and posttraumatic growth. Many participants had a form of coping but lacked a series of processes and understanding of the biopsychosocial effects of their exposures. Their traumatic exposures, occupational stressors, shift work, sleep issues, biopsychosocial factors, and cultural expectations increased the struggles with mental health and resilience. However, with awareness, access to proper resources, organizational buy-in, and a growth mindset, these participants felt successful in mitigating the effects of traumatic adverse exposure.

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Appendix: Interview Protocol

Interview Questionnaire

1. Can you tell me a little bit about yourself, how long you have been a first responder, your family status, and why you chose this profession?
2. Can you describe in your own words what a critical incident is to you and what types of setbacks you experienced from exposure?
3. Describe the stressors or setbacks you have experienced as a first responder outside of the workplace, due to the adverse exposure to human suffering and traumatic exposure.
4. Describe or share an example of adversity or difficulties you experienced on the job and how are you able to go on with your duties as expected.
5. Describe your strategies and ways you cope with the stressors and challenges of being and first responder constant exposure to the human condition.
6. Describe how you manage the emotional, social, mental, psychological, and spiritual factors that are often stressors or triggers to PTSD.
7. Describe how colleagues, leadership, and your organization support you following a critical incident.
8. Can you describe how stigma and cultural norms affect first responders from reaching out for help? How do you perceive the cultural stigma?
9. Describe the difficulties and challenges to coping and processing the traumatic experiences you have experienced. What types of obstacles did you face during and after the incident exposure?

10. How does your organization respond when there is a critical incident exposure?
11. How does your department create awareness of resources available for mental and behavioral health?
12. Describe your experience of processing the critical incident after exposure. Did you feel the clinician was culturally competent to work with first responders?
13. Describe the effects and challenges your career as a first responder has on your family and intimate partner relationships?
14. Can you share what you wish you had known prior to choosing this profession and the effects of exposure, burnout, and trauma?
15. Describe, as a first responder, what are some of the life difficulties or areas do you observe your coworkers experiencing or sharing with you?
16. Is there anything else that you would like to share with me today about your experiences or observations of first responders, the culture, challenges to mental health, or experiences of critical incidents?