

Summer 8-12-2019

## **Creating a Culture of Courage: A Behavioral Health Study of Resilience and Response to Traumatic Events for Firefighters**

Brett Ellis  
Concordia University- Portland, youthpastorbrett@gmail.com

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Summer 8-12-2019

# Creating a Culture of Courage: A Behavioral Health Study of Resilience and Response to Traumatic Events for Firefighters

Brett Ellis

*Concordia University- Portland*

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Concordia University–Portland

College of Education

Doctorate of Education Program

WE, THE UNDERSIGNED MEMBERS OF THE DISSERTATION COMMITTEE CERTIFY  
THAT WE HAVE READ AND APPROVE THE DISSERTATION OF

Brett M. Ellis

CANDIDATE FOR THE DEGREE OF DOCTOR OF EDUCATION

William Boozang, Ed.D., Faculty Chair Dissertation Committee

Brianna Parsons, Ed.D., Content Specialist

Belle B. Booker-Zorigian, Ph.D., Content Specialist

Creating a Culture of Courage: A Behavioral Health Study of Resilience and Response to  
Traumatic Events for Firefighters

Brett Matthew Ellis

Concordia University–Portland

College of Education

Dissertation submitted to the Faculty of the College of Education  
in partial fulfillment of the requirements for the degree of  
Doctor of Education in  
Transformational Leadership

William Boozang, Ed.D., Faculty Chair Dissertation Committee

Brianna Parsons, Ed.D., Content Specialist

Belle B. Booker-Zorigian, Ph.D., Content Specialist

Concordia University–Portland

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## Abstract

Firefighters experience a variety of challenging situations and traumatic events while performing necessary job duties as public servants, which can create behavioral health concerns and even suicide ideation. The purpose of this study is to recognize how individual resilience relates to lived experiences for firefighters who may need next-level behavioral healthcare, which in turn, will identify higher “at risk” firefighters with suicide ideation who need increased mental and emotional care outside of peer interventions. The fundamental question centers on *what* role does individual resilience, as well as formal and informal resources of behavioral health support, play in mitigating the impact of traumatic events? This study utilized qualitative research, specifically Interpretive Phenomenological Analysis, to identify how firefighters make meaning of resilience as it relates to lived experiences associated as a firefighter. Through direct observation interviews, analysis of the recorded data, descriptive, linguistic, and conceptual coding associations, and data-driven results, firefighters will provide the essence of their experiences in relation to individual resilience, post-traumatic stress symptoms, and suicide ideation while filling gaps in already conducted research within the fire service. Six themes emerged that will foster cultural change for firefighter behavioral health initiatives such as a tiered support plan, educative initiatives, intentional leadership actions, communicative resources, normalizing the symptomatic response as much as the event, and the need for a caring community for firefighters. Limitations of research design entail time constraints for a longitudinal study.

*Keywords:* PTSS, resilience, qualitative, suicide, firefighter, behavioral health

## **Dedication**

I dedicate this body of work to Jason “Hammy” Hamilton, my friend who made me laugh, made cry, made me laugh and cry at the same time, and inspired me on this arduous journey to impact my brother and sister firefighters from past, present, and future. Rest easy my brother, I will take it from here.

To my mother who taught me how to care and sacrifice for others and my father (Dr. Ellis) who taught me the value of education, work ethic, and to never settle for status quo by trusting in God’s plan by simply staying faithful.

To my three sons, who I love more than anything in the world. I always want to make you proud as your Daddy and set the example as a faithful follower of Jesus, faults and all, that when you set your mind and heart on a dream, your passion will serve a purpose for people. Each of you make me so proud and I know you will do great things in your life by simply loving others. I never truly understood God’s love for me until I held you in my arms for the first time.

To my wife and best friend, Kelley, thank you for always being loyal, supportive, and my rock for all that life throws our way. My academic journey would not have been possible without you by my side to encourage me. Your talents inspire me to try new things that I never imagined doing. I am forever blessed you chose me as your person.

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To the participants in my study, I thank you from the bottom of my heart for your openness, vulnerability, and trust you gave me for this project. My hope is that your courage to share will save firefighters and EMT's lives far beyond your fire departments.

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## **Chapter 1: Introduction**

Firefighters experience a variety of challenging situations and traumatic events while performing necessary job duties as public servants. Firefighters respond to a variety of calls such as fires, medical emergencies, motor vehicle accidents, hazardous material emergencies, natural disasters, and traumatic emergency calls that can create elevated stressors and symptomatic responses, leading to behavioral health concerns (Gulliver et al., 2018). There is an increased focus by fire service leaders for firefighter behavioral health due to signs and symptoms related to post-traumatic stress disorder (PTSD) and the growing trend of known suicide attempts (Mayo Clinic, 2015). In a study of 4,022 firefighters and medics performed and recorded by the Centers for Disease Control and Prevention (2012), the survey reported that 6.6% had attempted suicide and 37% had contemplated suicide, which spanned over all 50 states through survey monkey, led by Ambulance Service Manager.

The crux of the issue was exposed in a 2017 study that identified 103 firefighters died by suicide in comparison to 93 line-of-duty deaths out of 1,215,300 personnel in the calendar year of 2017, which included career, volunteer, and paid per-call firefighters (Dill, Douglas, & Heyman, 2018; U.S. Fire Administration, 2018). The fire service is ill-prepared for behavioral health initiatives for firefighters who present post-traumatic stress disorder (PTSS), which can lead to suicide ideation over time, due to increased risk, resulting from repeated traumatic events or emergency calls as a firefighter (Chung, Lee, Jung, & Nam, 2015). Onyedire, Ekoh, Chukwuorji and Ifeagwazi, (2017) stated, “Workers who have learned effective cognitive coping skills, persistence under adversity, and a strong work ethic are at a reduced risk for psychopathology” (p. 229). Occupational hazards confer risks for suicide based on PTSS as suicide ideation correlates directly to the degree of symptoms and PTSD, and serves as an

exposed reality in the fire service (Boffa, Stanley, Hom, Norr, Joiner, & Schmidt, 2017). Rosenberg and Yi-Frazier (2016) defined resilience as “the demonstration of emotional, behavioral, or health outcomes that match or surpass normative developmental milestones, behavioral functioning, or emotional well-being despite exposure to the substantial challenges of living” (p. 506). Fournier (2016) defined *locus of control* as, “The extent to which people believe they have power over events in their lives.

A person with an internal locus of control believes that he or she can influence events and their outcomes, while someone with an external locus of control blames outside forces for everything” (para. 1). Intervention initiatives can consider resilience and locus of control as predictors and protective factors for PTSS, but the relationship between resilience and PTSD is ambiguous and relies on distinct traits of a specific population (Onyedire et al., 2017). However, none of these resources identify specifically how individual lived experiences of firefighters, coupled with individual resilience within the context of formal or informal interventions, are most effective in countering the lasting effects of PTSD and suicide ideation. This study seeks to discover how firefighters, based on lived experiences, utilize individual resilience as well as formal and informal resources of behavioral health support to mitigate the impact of traumatic events.

### **Background, History, and Conceptual Framework for the Problem**

In a report issued by the International Association of Fire Chiefs (2017) on firefighter behavioral health, they stated, “variability as well as the frequency of calls contributes to our stress response, and how we handle this stress is one of the most important contributors to our emotional health and resilience” (p. 12). Although occupational stress has always coincided with an increase in occupational resilience awareness, studies reveal that repeated exposure to

traumatic events may decrease a firefighter's fear of death and increase their tolerance (numbing) to pain, therefore elevating the risk of suicide ideation since trauma exposure is higher in comparison to the general public (Henderson, Van Hasselt, LeDuc, & Couwels, 2016). Major gaps exist within the fire service in relationship to critical incident stress debriefing as firefighters report feeling increasingly distressed and invaded by these mediums whereas peer support and fire crew bonding seems to serve as welcomed platforms for coping with traumatic events (Jahnke, Gist, Poston, & Haddock, 2014). Recognition of the problem, responsive mediums that align with fire service needs, and rejuvenation for firefighter behavioral health in the fire service are necessary, needed, and critical to prevention and reduction of suicide ideation.

The conceptual framework recognizes individual resilience as well as fire service occupational resilience is an engrained trait for each person. The phenomena of how individual resilience relates to lived experiences for firefighters who may need next-level behavioral health care within the occupational expectations of repeated traumatic events is one aspect of behavioral health within the fire service as this study serves as a platform for behavioral health conversations to better identify and/or prevent suicide ideation.

As an impacted first responder and researcher, vested interests accelerate the need for this study, coupled with conceptual framework centered on increased clarity as to how individual resilience (subjective reality) plays a role in communal and peer responsiveness to traumatic events. Emergency calls or even a single call can elicit a number of symptomatic responses from firefighters, which could lead to behavioral health concerns throughout a fire service career. The theoretical framework embraces sociodemographic identifiers associated with firefighters that will help shape the study through rich and detailed accounts of firefighter resilience and informal

and formal interventions through lived experiences from traumatic events. Qualitative research, utilizing Interpretive Phenomenological Analysis (IPA), will link the richness of real-life experiences to individual resilience which could identify how firefighters make sense of their response through coping mechanisms and formal and informal resources of behavioral health support (Smith, 2011).

Further research by Pietrantonio and Prati (2008) shared,

Evidences showed that proximity, duration, and intensity of exposure are the most significant predictors of first responders' physical and mental health symptoms. The literature focused on negative outcomes such as traumatic stress symptoms, secondary traumatic stress or compassion fatigue, and burnout. (p. 14)

These studies show that experiences of firefighters and PTSD symptoms expose suicide risk for firefighters, especially based on a sense of calling and the effect of internal and external locus of control variables as predictors of PTSS, which is linked to suicidal ideation and consistently negative outcomes.

Peer intervention initiatives and strong communal support feed the needed response for firefighters, based on fire service tradition and accepted norms, as anxiety sensitivity based on call type can trigger re-experiencing, avoidance, and arousal symptomatic responses, which in turn necessitates increased study on individual resilience as a predictor based on sociodemographic identifiers. This study fills gaps in previous research by providing a platform through qualitative research, specifically the IPA framework, to gain insight into firefighters' lived experiences from individual perspectives within differing or similar contexts where individual resilience, coupled with tenure, rank, gender, age, and education levels may help

identify best practices for firefighter behavioral health needs (Boffa et al., 2017; Jo et al., 2017; Onyedire et al., 2017).

### **Statement of the Problem**

The rate of suicide is on the rise in the fire service nationally, therefore this study centered on the impact of individual resilience as well as formal and informal resources of behavioral health support to identify what role these play in mitigating the impact of traumatic events for first responders (Dill et al., 2018). Firefighters face a number of stressful situations such as pediatric deaths, Line of Duty Deaths (LODD), graphic suicides, seeing entire families killed, and catastrophic disasters where life and property are decimated which contribute toward PTSD. Because of these devastating and unique experiences, customized treatment is needed for firefighters. Jo et al. (2017) revealed how PTSD associations and burnout can have negative effects on job performance and interpersonal relationships, resulting in depression, alcohol abuse, low quality of life, and physical health problems. Since PTSD and suicidal ideation in the fire service is an under-researched phenomenon, this interpretive phenomenological study will serve as a platform to navigate complex, ambiguous, and emotionally-laden life experiences of firefighters on its own terms instead of using pre-existing presuppositions.

### **Purpose of the Study**

This research study sought to discover how firefighters, based on lived experiences, utilize individual resilience as well as formal and informal resources of behavioral health support to mitigate the impact of traumatic events to better identify suicide ideation in firefighters who may need increased mental and emotional care outside of peer interventions. This study attempted to develop a baseline for increased understanding for firefighter behavioral health needs based on the essence of individual life experiences of the sample group. The significance

of this study will better identify firefighter groupings who need next-level behavioral care as well as those who may consider suicide as an option due to symptomatic responses from traumatic events.

The fundamental question centers on *what* role does individual resilience as well as formal and informal resources of behavioral health support play in mitigating the impact of traumatic events. Primary research questions in support of the main research question help provide further insight into the lived experiences of first responders who have experienced traumatic emergency calls.

### **Research Questions**

- What are the lived experiences of first responders who have experienced traumatic emergency calls?
- What does it mean to be resilient as a first responder?
- What resources, trainings, and strategies are most effective for leadership to recognize in countering behavioral health needs in the fire service?

### **Rationale, Relevance, and Significance of the Study**

This study could contribute toward fire service initiatives as leadership embraces new programming with an increased focus on behavioral health with pre-edification programs for firefighters, post-incident debrief mediums to cope with traumatic events, and a support system for retired firefighters who may be struggling with years of PTSS. Firefighter behavioral health is underexplored, specifically, the relationship between positive and negative coping mechanisms for firefighters in relation to specific traumatic events. This study will fill gaps in research by capitalizing on the “lived” experiences of firefighters of different ages, genders, ranks, education levels, and tenures.

## Definition of Terms

A list of definitions for this study is provided below.

*Anxiety Sensitivity:* Anxiety sensitivity and PTSD are reciprocally linked. Following exposure to a traumatic event, individuals may learn to fear anxiety-related symptoms that are associated with the trauma. AS concerns are also a consequence of PTSD. AS cognitive concerns, specifically, may be the most robust predictor of suicidality (Stanley, Hom, Spencer-Thomas, & Joiner, 2017).

*Education Level:* the highest grade (level) completed within the educational system

*Locus of Control:* Fournier (2016) defined locus of control as, “The extent to which people believe they have power over events in their lives. A person with an internal locus of control believes that he or she can influence events and their outcomes, while someone with an external locus of control blames outside forces for everything” (para. 1).

*Locus of Control External:* blames outside forces for everything (Fournier, 2016).

*Locus of Control Internal:* believes that he or she can influence events and their outcomes (Fournier, 2016).

*Post-Traumatic Stress Symptoms:* Haslam & Mallon (2003) performed research to discover the relationship between firefighters and PTSS and concluded, “Re-experiencing includes symptoms such as flashbacks, intrusive memories, dreams and distress when exposed to stimuli that remind the person of the event. Avoidance includes ‘pushing’ thoughts or feelings out of one’s mind, avoidance of people or places or the inability to recall certain aspects of the event. Arousal is characterized by increased jumpiness, irritability and sleep disturbances” (para. 1).

*Rank*: a position of official standing within the organization (Firefighter, Driver/Operator, Lieutenant, Captain, Battalion Chief, Assistant Chief, Fire Chief)

*Resilience*: The Resilience Research Centre website stated “In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways” (para. 2).

*Tenure*: years in position of employment

### **Assumptions**

Through rich descriptions of firefighter lived experiences, best practices for firefighters in general may emerge that could predictably necessitate behavioral health initiatives based on traumatic events. Assumptions included how increased tenure and rank resulted in increased internal locus of control, therefore seeking behavioral health options are more likely. Company officers are more likely to recognize behavioral changes in their firefighters if the relationship is a trusting, empathetic mentoring relationship.

### **Delimitations**

The study was delimited to firefighters of different ranks, tenure, gender, education levels and age to provide a diverse sample size that makes sense of life experiences that may give a complete perspective as to how individual resilience for firefighters will identify firefighters with suicide ideation. Participants of the study shared openly with the researcher due to empathy, validation, and shared experiences of traumatic events which allowed for a comfortable interview environment.

## **Limitations**

Limitations for this study included time constraints (longitudinal effects), lack of prior research, self-reported data and bias due to being the researcher and a member of the fire service who cares deeply about this topic. To minimize the limitations and increase the validity of the research, reflexivity as well as thick and rich descriptions of the firefighters interviewed were measures that strengthened credibility.

## **Chapter 1 Summary**

Firefighters may experience varying degrees of behavioral health challenges connected to traumatic events throughout their career. The purpose of this phenomenological study was to explore the impact of individual resilience as well as formal and informal resources of behavioral health support to identify what role these may play in mitigating the impact of traumatic events for first responders. I began Chapter 1 with an introduction of the study with an intention to explore the known issues in the fire service concerning behavioral health, relationships between PTSS and burnout, locus of control and protective factors for PTSS, and how resilience is both occupational and individual. The background, context and conceptual framework provided a brief description of previous literature that aided in identifying gaps for this study to fill and exposed research questions that needed to be answered. The definitions and attributes section provided key words within the study to help readers identify with firefighters and symptomatic responses. Assumptions, delimitations, and limitations provided a foundation of reflexivity to remove personal bias and allow the research to speak for itself.

Chapter 2 will review the literature which provided the conceptual framework and basis for this study where gaps existed in areas of formal and informal resources for behavioral health, resilience, and the impact of repeated traumatic events for firefighters in relation to

sociodemographic identifiers. The literature review findings did show the relationship exists between PTSD symptoms and suicide risk for firefighters and that peer interventions and strong communal support feed the needed response for firefighters who may need next-level behavioral healthcare.

## Chapter 2: Literature Review

The fire service is ill-prepared for behavioral health (mental and emotional) initiatives for firefighters who present PTSS, which can lead to suicidal ideation over time due to increased risk resulting from repeated traumatic events or calls as a firefighter (Chung et al., 2015). Being an understudied phenomenon in the fire service, this study discovered how the fire service can better recognize PTSS in firefighters to reduce suicide ideation and identify those in need of next-level care by looking through the lens of nine firefighters' lived experiences while navigating the impact of traumatic events. The fire service as a whole has relied on occupational resilience, fire service cultural norms, individual resilience, peer interventions, and the use of Critical Incident Stress Management Teams for identification, treatment, and recovery of PTSS.

Cultural change necessitates pre-incident edification programming and appropriate post-incident responsiveness that will adequately identify firefighters who may need next-level behavioral health care. Firefighters are more likely to utilize peer interventions as a primary means for the potential need of next-level care; therefore, fire service leaders should focus on preparing firefighters and company officers to be attentive, responsive, and supportive to one another in the daily contexts in which firefighters are accustomed (Jahnke et al., 2014).

Resilience is contextually and culturally bound which supports how fire service traditional norms are comprised of occupational resilience for response to PTSS. Firefighting is a stressful job and treatments are needed to be tailored for firefighters to meet their behavioral health care needs (Pao & Tran, 2017). Even with barriers, success is possible with defined protective factors that can move survival to adaptation as firefighters are known to adapt to new behavioral health initiatives in addition to resilience, based on fire service cultural norms with innovative means for needed behavioral healthcare reform (Santos, 2012).

Gist, Taylor, and Raak (2011) stated,

Suicidal ideation is more likely to be found among those with depression, anxiety, conduct disorders, and substance abuse; transition from ideation to attempt is more than twice as likely among those with anxiety disorders (such as PTSD) and conduct disorders. (p. 11)

Occupational hazards confer risks for suicide based on PTSS as suicide ideation correlates directly to the degree of symptoms and PTSD, and serves as an exposed reality in the fire service (Boffa et al., 2017). Evident associations exist between PTSD, suicide risk, and anxiety sensitivity, increasing the likelihood of behavioral issues that necessitate prompt response from fire service leaders (Stanley et al., 2017).

Pietrantonio and Prati (2008) stated,

First responders are exposed to potentially traumatic events as part of their duty such as accidents involving children, mass incidents, major fires, road traffic accidents, burns patients, violent incidents, and murder scenes. These events are named critical incidents in that they may be any event that has a stressful impact sufficient enough to overwhelm an individual's sense of control, connection and meaning in his/her life. (para. 14)

My study helped fill gaps in research where life experiences of firefighters and critical incidents intersect individual resilience and mitigating formal and informal mediums for firefighters to share concerns with the impact of traumatic events.

Sense of "calling" to a career in the fire service identified a stronger positive association between burnout and PTSS as the fire service adapts/changes over time based on factors of tenure, rank, career focus, age, gender, and education levels (Jo et al., 2017). A person's internal locus of control can adjust while adapting to stress as studies show a high external locus of

control can predict increased PTSS, which can lead to increased suicide ideation (Onyedire et al., 2017). Caring relationships are the building blocks of resilience in the workplace for organizational support and function as a necessity for firefighters with both pre-incident and post-incident initiatives. The role of intervention initiatives can consider resilience and locus of control as predictors and protective factors for PTSS, but the relationship between resilience and PTSD is ambiguous and may rely on distinct traits of a specific population (Onyedire et al., 2017).

An identified gap in current research is the minimal responsive measures to improving internal or external locus of control for firefighters. Boffa et al. (2017) identified the important role of connectivity to one's peer community as well as professional help to the reduction of suicide ideation and attempts based on the severity of the traumatic event. An increase in mentoring awareness will focus on communal responsiveness, post-traumatic mediums, and will prepare peers to identify fellow firefighters who may need next-level care based on symptomatic response. Henderson (2012) shared how people need to hear less about susceptibility and more about one's ability to rebound from tragedy and adversity through resiliency, which aids in processing emotional shifts from post-trauma "damage" to post-trauma "challenges." Pennebaker and Smyth (2016) identified that each person becomes their own scientist through self-discovery by writing down traumatic events with thoughts/facts and/or feelings where a person can better process PTSD occurrences. In a study done by Stanley et al. (2017), anxiety sensitivity and PTSD are reciprocally linked, that is, following exposure to a traumatic event, individuals may learn to fear anxiety-related symptoms that are associated with the trauma. Anxiety sensitivity concerns are also a consequence of PTSD and cognitive concerns, specifically, may be the most robust predictor of suicidality.

Jo et al. (2017) used self-reporting questionnaires (quantitative) in a study performed with 109 firefighters in South Korea, to identify if PTSD and burnout shared common symptoms but different causes. They found that PTSD focuses on the traumatic event or repeated traumatic events whereas burnout job characteristics, such as workload, work structure, job support, role conflict, and role ambiguity were associated with burnout characteristics. The significance of this study focused on the relationship between symptomatic responses with different causes but failed to capture how resilience contributed to sense of calling through different stages of a fire service career.

Henderson et al. (2016) stated,

The fire service has burgeoning rates of suicide, at least in part, due to cultural stigma and untreated mental health disorders. Indeed, there is a history of stigma attached to mental health that prevents fire service administration from providing needed resources and firefighters from seeking these resources. (p. 226)

The key areas of research focus on the relationships between resilience, PTSS and suicide ideation, anxiety sensitivity, and how locus of control and resilience function as a predictor of PTSS. Expressive writing, caring communal relationships, and behavioral health programs (pre- and post-incident) can possibly aid in reducing PTSS as well as identification of PTSS in firefighters who need next-level care after a traumatic event.

Age-old practices, egocentric attitudes, lack of research, and poor leadership has contributed to an environment where firefighters are left with uncertainties associated with PTSS, which has contributed to suicide ideation. Fire service leadership has an opportunity to embrace cultural change by enacting empathetic understanding through the eyes of firefighters suffering from PTSS, provide preventative edification identifiers for firefighters who may

present PTSS, peer intervention techniques, and post-incident response based on occupational resilience levels, which are identified through relationship of symptom to resilience measurements (Rothmeier, 2017).

The fire service could utilize pre- and post-incident initiatives to educate, identify, and respond accordingly to PTSS through individual and communal resilience identification, which could cultivate a high internal locus of control for adaptive firefighters, therefore reducing suicide ideation as well as recognizing firefighters who need next-level behavioral health care. Milligan-Saville et al. (2017) suggested, “regular exposure to traumatic events, experienced by military veterans and emergency services personnel alike, may have a particularly deleterious impact on their physical health” (p. 145). This study will create a platform of information sharing for firefighter behavioral health monitoring systems before and after traumatic events. The fundamental question centers on *what* role does individual resilience as well as formal and informal resources of behavioral health support play in mitigating the impact of traumatic events through the lens of firefighters’ lived experiences?

### **Conceptual and Theoretical Framework**

The overarching theoretical framework uses the lens of interpretivism (constructivism) through social action theory. For an interpretivist researcher, it is important to understand motives, meanings, reasons and other subjective experiences which are time and context bound (Hudson & Ozanne, 1988). The goal of interpretivist research is to understand and interpret the meanings in human behavior rather than to generalize and predict causes and effects (Neuman, 2000). Dudovskiy (2017) explained that according to interpretivist approach, it is important for the researcher as a social actor to appreciate differences between people as interpretivism studies usually focus on meaning and may employ multiple methods in order to reflect different aspects

of the issue. Firefighters respond and react to traumatic events as individuals as well as in communal fashion amongst peers, critical incident stress management (CISM) teams, and additional mediums that fire departments establish when occupational resilience may not be sufficient for mental and emotional processing.

The fire service is slowly recognizing that firefighters interpret call type subjectively as fire service tradition leans heavily on occupational resilience instead of recognizing how individuals cope with PTSS which entail numerous complex behavioral responses.

Creswell (2009) stated,

Social constructivists believe that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings of their experiences – meanings directed toward certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories or ideas. (p. 8)

Firefighters generate new knowledge through multiple experiences in a variety of contexts, which with the proper processes in place; therefore, leaders may be able to equip firefighters to function in perceived subjective realities before, during, and after an incident occurs (Dudovskiy, 2017).

The fire service as a whole and the wider society is identifying PTSD as a legitimate concern for firefighters with a deepening threat to emotional and mental health of a soldier in combat (Pao & Tran, 2017). Interpretivist theory seeks to explain the phenomenon behind current fire service culture in response to PTSS and how resilience plays a role in symptoms leading to suicide ideation through personal human interaction and tries make sense of what is perceived as reality. Fire service leadership has an opportunity to embrace cultural change by

enacting empathetic understanding through the eyes of firefighters suffering from PTSS through rich, detailed lived experiences of firefighters who are courageous enough to share their stories of how it has affected their lives.

The theoretical framework considers an interpretivist approach to social research as qualitative, using methods such as structured interviews or firefighter observation for mediums to connect resilience to PTSS, based on open communicative lines through lived experiences. PTSD is affecting firefighters based on the number of increased suicides and burnout from the fire service, even with occupational resilience as a given agreeance. Jackson and Delehanty (2013) stated, “In order to shift a culture from one stage to the next, you need to find the levers that are appropriate for that particular stage in the group’s development” (p. 8). In order to shift fire service culture, levers of courage to initiate conversation, identifying high-risk individuals, and implementing processes are necessary to better identify firefighters with suicide ideation based on PTSS. My conceptual framework is based on personal interests and literature reviews, and on how individual resilience relates to lived experiences for firefighters operating within traumatic events who may need next-level behavioral health care outside of peer interventions (Riggan & Ravitch, 2017). Due to a number of occupational stresses associated with firefighting where occupational resilience plays a key role, prevention and treatment need to be tailored for firefighters in response to stress and recognized PTSS, considering the egocentric culture steeped in deep tradition (Pao & Tran, 2017). Leadership is an area of necessary focus in the fire service which centers on how leadership embraces traditional roots, coupled with cultural change and increased awareness, recognition, and action to better prevent suicide ideation and suicide attempts.

Leadership fundamentally motivates followers, mobilizes resources toward organizational goals, and is the engine that drives innovation, adaptation and performance (Antonakis & House, 2014). Leadership requires boldness and a willingness to take steps that others are too timid to take where vision necessitates action-oriented responses that feed on habitual patterns of everyday work (Robinson, 2011). To be an effective leader, I realized that strategy matters, taking action equates to movement, identification of strengths in others fosters collaboration, cultivating opportunities for people to shine, and always striving toward personal improvement as an adult learner defines a leadership legacy. Fire Service leaders should ask questions to identify potential consequences and analyze the results for further feedback which can lead to improved decision making that increases safe practices and movements of change based on constant needs assessments (Patterson, Grenny, McMillan, Switzler, & Maxwell, 2013).

### **Leadership Expectations**

Leaders must be purposeful when enacting change through organizational adaptability, individual motive, and effective workgroups to accomplish tasks that grow the organization as well as people (Schmuck, Bell, & Bell, 2012). Task and relational behaviors both shape progress of the leader/follower connection by facilitating strategic, structured goals while connecting relationally and increasing the comfort level of the reciprocal relationship. Correctly identified leadership attributes coupled with a collaborative cultural shift rely on communication, organizational stakeholder buy-in, sharing of information, motivating the team and a crew of visionary people that work as game-changers who holistically desire firefighters to lead healthy lives mentally, physically and emotionally (Rosen, 2013). As a collaboration architect, my role is to “anticipate, educate, inaugurate, motivate, and facilitate” the plan and people as we create a collaborative culture for change in the Fire Service in how, why, and when we respond to the

behavioral health needs of our firefighters (p. 21). The fire service desperately needs academics to perform sound research for further development of organizational needs for collaborative change.

### **Cultural Change**

Great organizations are ones that deliver superior service through performance to internal and external customers where the long-lasting impact results in generational legacy handoffs of passion, mission, and preparedness for people to lead, while investing in stakeholder needs to prevent additional loss based on the effects of PTSS (Collins, 2005). Climate change for any organization necessitates a willingness to accept that change is necessary within the culture of the organization (Muchiri, Cooksey, & Walumbwa, 2012). Relational dynamics and communicative norms dictate how internal stakeholders feel and think as a tone for an organization is set by forward-thinking leaders in the fire service, recognizing that PTSD is real, vibrant, and destroying firefighters and the people around them. People respond within cultural contexts by defining culture as “an ambiguous text constantly in need of interpretation by those who participate in it” (Mezirow, 1991, p. 133). As a communal culture exists within the context of fire service, I, as a change leader, personally engage in sound research that focuses on real issues that the fire service has been traditionally ill-prepared to discuss. Fire Service leaders who embrace their role within an organization, facilitate knowledge-gaining opportunities that create transformative experiences where synergistic learning between leadership, management, and employee breed mutuality in the learning process through an intentional collaborative culture, specifically the need for cultural change with behavioral health of our firefighters (Hislop, 2013).

The current literature review provides multi-faceted argumentative support for my conceptual framework that centers on how individual resilience relates to lived experiences for

firefighters who may need next-level behavioral health care, which in turn, will identify higher “at-risk” firefighters with suicide ideation who need increased mental and emotional care outside of peer interventions.

### **Future Research**

The literature reiterates the relationship between resilience (occupational and individual) and PTSS associated with the fire service and the need for communal care for firefighters. The argument is grounded in a needs assessment in the fire service for a cultural shift with PTSD, problematic traditional approaches to PTSS, and how firefighter emotional and mental behavioral care has been insufficient due to increased suicide ideation and attempts. Further research will explore resilience, contributing factors to PTSS, pre-incident edification programming, peer intervention training, and post-incident mediums that intentionally address immediate needs and forecast future responsive programs with associated measuring tools. PTSS is prevalent in primary care settings, which has prompted the suggestion that screening for PTSD among firefighters complaining of multiple somatic symptoms could be implemented (Sonis, 2013). Further research is needed to identify screening processes and appropriate responsive measures for firefighters and behavioral health support.

### **Review of Research Literature and Methodological Literature**

To fully explore the research literature that centers on resilience, PTSS, locus of control, and suicide ideation in firefighters, I utilized numerous suggested texts and peer-reviewed articles from the Concordia University Database. Key words in the search included: *firefighter stress, PTSD, coping mechanisms, suicide ideation, resilience, locus of control, IPA (Interpretive Phenomenological Analysis), interpretivists, social action theory, and peer interventions*. The resources used in the literature review guided and shaped the intentionality of interview

questions, inspiration for resilience to symptom relationship, and direction for future research possibilities.

Chung et al. (2015) recognized through their study that firefighters represent a population at high risk for the development of PTSD symptoms and PTSD develops or progresses secondary to chronic exposure to risk factors. Since resilience is subjective and the effects of emergency calls from firefighter to firefighter vary based on a number of factors, resilience serves as connective tissue between the firefighter and PTSS. Resilience is individual, communal, relational, cultural, and physical when faced with traumatic events and how one responds in the midst of tragedy.

The International Association of Fire Chiefs (2017) issued a report that stated,

There is a fear of being ostracized by telling our brothers and sisters that we are having a hard time dealing with a call; there is also a fear that if the command staff finds out that we are struggling, that we will be viewed as unfit for service. (p. 13)

Based on fire service cultural traditions, environmental and personal factors play an integral role in how resilience for firefighters relate to mental and emotional intervention needs in response to traumatic events. How a firefighter interprets trauma and is impacted by traumatic events vary from firefighter to firefighter so a “one size fits all” approach is inappropriate for behavioral health needs (Glenn, 2017).

The conceptual framework recognizes individual resilience as well as fire service occupational resilience as an engrained trait for each person in addition to what is learned within the occupational expectations of repeated traumatic events and how firefighters respond based on their “call” to the service. In a report written by Heinrichs et al. (2005) they stated, “recovery from PTSD is significantly influenced by the ability to preserve social support networks and in

turn social support might be an important factor for maintaining high levels of self-efficacy in the high-risk population of firefighters” (para. 17).

Santos (2012) suggested how resiliency strengthens even with barriers, and how success is possible with protective factors that move from survival to adaptation through intentional developmental processes that incorporate self-righting tendencies of individuals. Firefighters can adapt to contextual frameworks when protective factors become part of processes that can better identify PTSS, especially through peer interventions which is the current primary means of exposure and communicative strategy. For recovery efforts when resilience is lacking, firefighters need empowering approaches toward new behavioral challenges with a positive perspective on pain, tragedy, and trauma, going forward in life instead of a negative trajectory toward suicide ideation (Henderson, 2012).

Jo et al. (2017) shared,

The effect of a sense of calling on the relationship between burnout and PTSD symptoms was supported; however, a sense of calling aggravated the relationship between exhaustion and PTSD symptoms. Although a calling to a field of work is generally perceived as a positive variable, it can be harmful to people who are exhausted. (p. 122)

Recognition of PTSS will help identify suicide ideation and reduce the risk of firefighter suicide attempts through intentional peer relationships as well as professional assistance from fire department programs, centered on peer interventionist edification, pre-incident education, and post-incident needs assessment mediums as incident types increase in severity (Boffa et al., 2017).

The degree of relationship between PTSS, emergency call type, and resilience serve as indicators of suicide ideation, which may surface in peer intervention contexts, post-incident briefings or periods of time following traumatic events for firefighters. The conceptual framework connects the importance of PTSS recognition for suicide ideation purposes and how resilience may not be enough to combat PTSS since firefighters (occupational resilience) re-experience repeated traumatic events with little to no care outside of peer interventions (Boffa et al., 2017). Identified mediators, factors that account for the link between symptoms and suicide risk and intentional programming may prevent the trajectory toward suicide ideation and prevent suicide attempts for firefighters.

IPA will identify personal triggers through rich, detailed experiences of firefighters that support best practices with internal and external loci of control, therefore identifying how resilience and locus of control interplay with high behavioral health emergency calls that could cause PTSS to develop and worsen (Pietkiewicz & Smith, 2012). Onyedire et al. (2017) stated, “by studying the psychosocial factors in PTSD among firefighters the field of occupational mental health can ultimately develop increasingly effective strategies to help people negotiate and potentially grow from stressful and traumatic work situations through effective programming” (p. 228). This research supports practical pre/post incident needs for fire service personnel and elicits responsiveness of fire service leaders to enact effective strategies for behavioral care for firefighters.

IPA will produce detailed descriptions about fire service culture through interviews, analysis, and emerging themes where claims are bound to fire service culture and identifiable change will produce new behavioral health mediums for coping with PTSS in addition to resilience (Pietkiewicz & Smith, 2012). Brewin et al. (2002) created a questionnaire as a

tangible tool to help firefighters self-identify emotional and mental needs 7–10 days after a traumatic event which, based on individual scoring, identified firefighters who fell into three distinct categories of behavioral health needs. Anxiety sensitivity is described as “the fear of fear” and is linked to more severe PTSS and is directly linked to exposure from a traumatic event as firefighters may learn to fear anxiety-related symptoms associated with traumatic events (Stanley et al., 2017). This research connects the conceptual framework for firefighters who “re-experience” symptoms associated with PTSD, to be at higher risk for suicide ideation and need outlets for symptom recognition for proper care and treatment.

Stanley et al. (2017) highlighted the importance of controlling for depression symptoms in analyses and examining the link between PTSD symptoms and suicide risk as well as how robust effects were found in the present study for the relationship between re-experiencing symptoms and suicide risk through anxiety sensitivity concerns, suggesting that facets unique to PTSD confer risk for suicide. The link from this study to my conceptual framework could necessitate a survey to identify patterns of high traumatic calls based on occupational resilience to identify potential anxiety sensitivity triggers.

Fire service tradition relies on a “calling” to a profession with inherent risk, need for courageous acts, and self-sacrifice through risk analysis. Fire service “burnout” is associated with more severe PTSS whereas response to one’s “calling” serves as a buffer between burnout and PTSS (Jo et al., 2017). The conceptual framework connectivity recognizes the importance to personal and occupational factors that could lead to burnout, which in turn, could lead to increased PTSS for firefighters as they enter different stages of their career, different ranks, and how individual and occupational resilience connects to the “call,” burnout, and PTSS (Jo et al., 2017). Many symptoms associated with PTSD are closely related to burnout exhaustion

therefore could aid in preventative measures as symptoms begin to surface. A firefighter's "calling" could be an effective connecting agent to new firefighters in the service who rely heavily on their new sense of "calling" to serve in the profession, as a predictor of burnout and PTSS, preventing or treating early suicide ideation.

Boffa et al. (2017) pursued research through a nationwide study of 893 firefighters to discover if the relationship of PTSS and suicide ideation correlated directly to the degree of symptomatic responses and shared, "recalling and reprocessing an index trauma, there are concerns that the stress of this component may increase suicidality" (p. 281). This study will support the theoretical element of my research in regards to interpretive phenomenological analysis as the researcher attempts to empathize with individuals (firefighters) and make meaning through translation of repeated exposure to painful situations which may relate PTSS to suicide ideation (Pietkiewicz & Smith, 2012). By conducting research qualitatively, it will speak for itself through individual examination with detailed insight into life experiences which are being compared and contrasted between firefighters, identifying recurring themes.

Stanley et al. (2017) performed quantitative research to identify the relationship between anxiety sensitivity and PTSD following exposure to a traumatic event, specifically for women firefighters. Results shared how individuals may learn to fear anxiety-related symptoms that are associated with traumatic calls. Qualitative research grounded in IPA will support necessary data gathering and analysis to discover the emic perspective of firefighters as well as if there is a difference between male and female firefighters AS and PTSS relationship (Pietkiewicz & Smith, 2012). Stanley et al. (2017) stated, "levels of anxiety sensitivity prior to exposure to a traumatic event prospectively predicted levels of PTSD symptoms post-exposure, leading the researchers to highlight anxiety sensitivity as a potential causal risk factor for the development of PTSD

symptoms” (para. 30). Social action theoretical framework strongly supports identifying individual anxiety sensitivity in male and female firefighters and what triggering emergency call type is motivating the anxiety, which is a possible risk factor for PTSS.

Onyedire et al. (2017) wanted to discover through surveys if resilience and work locus of control are predictors of post-traumatic stress disorder symptoms among Nigerian firefighters. Results showed,

Firefighters who have learned effective cognitive coping skills, persistence under adversity, and a strong work ethic, are a reduced risk for psychopathology.

Personality variables especially having a tolerance for ambiguity, resilience, and hardiness, as well as whether a person is a type A or type B personality, determine how a person reacts to difficult job situations. Those with a high internal LOC believe their will and behavior is directed by their own internal decisions and thus feel as if they have more influence on their environment. Firefighters who were of higher ranks in the job had lower PTSD symptoms and higher educational status was associated with greater resilience and lower PTSS. Higher resilience was associated with lower PTSD symptoms and external work locus of control was related to greater PTSD symptom. (pp. 228–231)

Through life experiences of firefighters, and behavioral reactions to traumatic events, locus of control, both internal and external, could play an important role future research studies for firefighter behavioral health.

In a recent study, higher resilience was associated with less or fewer PTSS as locus of control was a positive predictor of PTSS, indicating that external control beliefs in the workplace were associated with increased PTSS and how influential a firefighter’s locus of control can change in adapting to stress, especially those with a strong internal locus of control (Onyedire et

al., 2017). Onyedire et al. (2017) reiterated that psychological resilience is a unique quality that determines an individual's capability to deal with adversity and resilient or hardy workers are team oriented, effective communicators, adaptable to change, hold positive and flexible attitudes, engage in continuous learning, are self-confident, willing to take risks, and committed to personal excellence. Onyedire et al. (2017) shared that caring relationships are the building blocks of resilience in the workplace and fire service cultural change needs an open communication system and supportive work environment for awareness creation programs that empower a culture of courage in the fire service (p. 240). The fire service is just now addressing PTSD for firefighters as a known issue that needs immediate attention due to increased suicide ideation, suicide attempts, and early retirement for firefighters.

Wilmoth (2013) shared the importance of treating firefighters the same as the people they serve in emergent situations and how firefighters could benefit from a simple questionnaire that helps them recognize self-identifiers after an incident as a starting point for potential increased risk factors associated with PTSS and PTSD. The questionnaire is a tool that supports an increase in responsive attention to PTSS and how resilience as well as occupational variables play a role in suicide ideation. Another coping mechanism that can aid firefighters in processing emotional and mental behavioral care focuses on expressive writing after a traumatic event where one writes down the facts as a form of writing self-therapy (Pennebaker, & Smyth, 2016).

### **Review of Methodological Issues**

After extensive review of the literature, it is apparent that mixed methodology captured the qualitative and quantitative approaches necessary to substantiate current findings as well as the need for additional research in this particular field of study. The literature review and methodology synthesis identified strengths and weaknesses in the research, limitations of the

mixed methods, and design feasibility for maximum exposure of issues within the fire service for further research needs. Creswell (2009) stated, “Another way of viewing designs is to look at mixed methods procedures not as designs but as a set of interactive parts” (p. 104). Based on the literature review and methodology identified, mixed methods provided a well-rounded, interactive perspective of issues involving resilience, PTSS, suicide ideation, locus of control, and occupational resilience for firefighters. The current research utilized quantitative surveys for the majority of the data collection and interview/direct observation for the additional mixed methodology.

Mixed methods were used for focus groups through interviews as well as a longitudinal study with sample groups to identify that pluralistic understanding and resilience is multi-dimensional. The strength of this research is the longitudinal study to monitor how resilience plays a role cross-culturally, in a variety of contexts and with complex service histories. The design feasibility of both qualitative and quantitative data of this particular study would contribute to facilitating resilience processes as reliable data within a number of contexts, specific to my study in fire service organizations. Chung et al. (2015) sampled 185 male firefighters, based on survey responses, without a psychiatric disease history in a 5-year study to identify the relationship between occupational stress, PTSD and personality to discuss and discover symptoms that could identify firefighters’ needs related to multiple stresses of the job. One of the limitations to the study was gender identification and focus on male firefighters, even though females serve as well. The feasibility of this study strengthens the identifiers for the fire service to better recognize how occupational stress can interrelate and identify the need for fire departments to provide mediums for behavioral health initiatives in the fire service.

Stanley et al. (2017) invited female firefighters through emails, social media, and other web-based announcements to participate in suicide prevention initiatives that would better identify the relationship between anxiety sensitivity and PTSD. Research data was gathered through surveys, which highlighted the importance of controlling for depression symptoms in analysis examining the link(s) between PTSS and suicide risk as it relates to re-experiencing symptoms and anxiety sensitivity (Stanley et al. 2017). Male and female firefighters could be used in a future study to gain insight into a male-dominated profession such as the fire service, which may identify gender differences and challenges associated with how PTSS are identified, communicated and addressed.

Wilmoth (2013) provided a fire service tool for fire departments to utilize based on the National Fallen Firefighters Foundation Life-Safety Initiative #13, which calls for counseling support for firefighters and their families. The methodology tool is a self-report questionnaire that firefighters are given after an identified traumatic event occurs to gauge possible mental and emotional health needs for firefighters who may present as “high risk.” This questionnaire serves as a springboard for fire departments to integrate into their current or future debriefing processes for firefighters and could feasibly identify next-level care need for firefighters and their families.

Onyedire et al. (2017) approached the relationship between PTSS, resilience and locus of control with multiple quantitative questionnaires, utilizing the resilience scale, work locus of control scale and PTSD checklist with 116 paid, professional firefighters (98 males, 18 females). The strength of this methodology provided diverse quantitative surveys that identified multiple connecting facets of research as well as gauging how personality types integrate into identified strengths and weaknesses of resilience, work locus of control and PTSS for firefighters. The

research created a positive effect based on the methodology which gained insight for both gendered firefighters, personality types, and how a firefighter responds when facing a traumatic event. Jo et al. (2017) used data from self-reported questionnaires from 109 firefighters that were analyzed using hierarchical linear regression to see the relationship between burnout and PTSD by identifying occupational variables. This research and methodology appropriates feasible data through quantitative analysis for the relationship between occupational fire service variables and data analysis, specifically how a sense of “calling” plays a factor in the relationship.

Boffa et al. (2017) initiated a nationwide quantitative survey of 893 firefighters to discover if the relationship of PTSS and suicide ideation correlate directly to the recognition of symptoms and “re-experiencing” symptom clusters. Quantitative analysis for this study highlights the strength of inferential methodology based on the relationship between variables. Due to the volume of surveyed firefighters, qualitative analysis, such as direct observation and interviews, would be time-consuming unless this study presented as a longitudinal study for the fire service. Henderson (2012) analyzed past research by reviewing case studies performed by sociology experts based on narratives as to how people rebound from tragedies through personal resilience. One limitation to this resource is how minimal the research methodology was as this resource’s primary focus was result driven. The strength of this resource and research supports the theoretical framework from a social constructivist view that throughout life experiences, subjective meanings are diverse and complex, based on how an individual shifted from trauma damage to post-trauma challenge response through individual resilience (Creswell, 2009; Henderson, 2012). Santos (2012) used mixed methods based on previous research to discover how resiliency impacts success for students as adaptive individuals surviving traumatic events.

Santos (2012) performed a literature review for this particular study. The strength of this literature review capitalized on a variety of resilience studies and identified the importance of protective factors in multiple contexts, thus relating well to the fire service and occupational resilience. Pennebaker and Smyth (2016) used qualitative research through direct observation/interviews of therapists, colleagues, students, and practitioners to identify if writing down thoughts, facts, and/or feelings would help process PTSD occurrences. Interviews of therapists, colleagues, students and practitioners strengthen the design feasibility to get a well-rounded perspective of data based on a number of variables such as age, education level, experiences and expertise.

### **Synthesis of Research Findings**

Santos (2012) identified through resiliency theory that individual resilience develops over time, especially with protective factors that move individuals from survival to adaptation. Resilience is contextually bound where strong communal ties coupled with relationally-driven contexts increase the likelihood of adaptive actions in the midst of traumatic events. Firefighting is a stressful occupation with inferred resilience based on the nature of the job, expectations of firefighters, and repeated exposure to traumatic events (Pao & Tran, 2017). Emergency service personnel, specifically firefighters, are at an increased risk to the development of PTSS due to frequent exposure to traumatic events (Haslam & Mallon, 2003). Protective factors for firefighters, such as community, strong internal locus of control and contextually bound expectations connect as ideational elements when discussing resilience within the contextual boundaries of occupational stress, PTSD and personality typing (Chung et al., 2015). The primary protective factor of individual resilience empowers individuals to focus less on susceptibility and embrace an increased self-awareness to rebound from tragedy and adversity

when faced with repeated traumatic events (Henderson, 2012). Onyedire et al. (2017) reiterated “resilient or hardy workers are team oriented, effective communicators, adaptable to change, hold positive and flexible attitudes, engage in continuous learning, are self-confident, willing to take risks, and committed to personal excellence” (p. 230). Re-acclimating to civilian life while processing traumatic events, especially outside of the communal context of peer firefighters, is difficult for firefighters as their support system may not recognize the full extent of PTSS in relation to the type of traumatic events experienced (Self, 2008). Chung et al. (2015) conducted a study of 185 male firefighters without a psychiatric history where findings identified social introversion and a negative view of personal self as a strong connection to PTSS development, which indicated the need for external support from communal mediums.

In a nationwide study of 893 firefighters, Boffa et al. (2017) discovered how re-experiencing PTSS related strongly to suicide ideation but strongly re-experiencing the same type traumatic call led to suicide attempts. Social support is key to addressing trauma, and firefighters welcomed support from fellow firefighters who may recognize patterns, behaviors, call type anxiety, and need for next-level care interventions for struggling peers. Stanley et al. (2017) stated, “Anxiety sensitivity can be broadly conceptualized as the “fear of fear.” A corpus of research has linked elevated anxiety sensitivity to more severe PTSD symptoms, and anxiety sensitivity is generally conceptualized as a vulnerability factor for the subsequent development of PTSD” (p. 95). For instance, reoccurring call type for a firefighter (deemed as traumatic in nature based on high behavioral health risk, low frequency) can trigger hyper-sensitivity as soon as the emergency call type is initiated, therefore increasing the anxiety of the first responder.

Emergency call types, such as incidents involving children, have been reported to cause the most stress for firefighters, resulting in re-experiencing intrusive memories (Clohessy &

Ehlers, 1999). Effective coping skills, persistence under adversity and a strong internal locus of control reduce the psychopathological risk by recognizing their behavioral responses are directed from their own internal decisions, resulting in a positive influence in their environment of surrounding peers (Onyedire et al., 2017). An additional coping mechanism encourages individuals who experience a traumatic event to write down the facts, much like a newspaper article, creating a process of self-help therapy for firefighters and their peers (Pennebaker & Smyth, 2016). Debriefing helped firefighters to cope with stresses experienced in relation to rescues at working fires but no difference was found between those debriefed and those who simply talked to other firefighters by use of peer intervention (Hyttén & Hasle, 1989). Wilmoth (2013) created a survey for post-incident data gathering that could better recognize the behavioral health of a firefighter, which provided feedback for those who may need next-level care. By treating firefighters the same as the people they serve on emergency calls, firefighters can receive better care that holistically addresses the emotional and mental state of firefighters through self-identifiers, which allow for self-assessing and reporting should the firefighter choose to seek additional help.

Caring relationships are the building blocks of resilience in the fire service, even as assumed occupational resilience falters and fails first responders through peer interventionalists. To truly embrace the needs of fire service personnel, employee assistance programs, post-incident briefing teams and pre-incident discussions with new firefighters coursework could proactively build relationships between peers, provide firefighters with organizational support and embrace individual resilience in an industry that expects occupational resilience to suffice. Onyedire et al. (2017) reiterated,

Firefighters who were of higher ranks in the job had lower PTSD symptoms, higher educational status was associated with greater resilience and lower PTSS, higher resilience was associated with lower PTSD symptoms, external work locus of control was related to greater PTSD symptoms. (p. 236)

Firefighters repeatedly describe a sense of “calling” to the fire service with opportunities to alter the outcome of severe emergencies through diligent training, operational emergency mitigation, resource allocation, and managing risk by solving problems.

In a recent study of 109 firefighters, Jo et al. (2017) wanted to identify the relationship between burnout, PTSD and how a sense of “calling” relates to PTSS, which discovered, The effect of a sense of calling on the relationship between burnout and PTSD symptoms was supported; however, a sense of calling aggravated the relationship between exhaustion and PTSD symptoms. Although a calling to a field of work is generally perceived as a positive variable, it can be harmful to people who are exhausted. (p. 122)

This could connect to new, less experienced firefighters (outside of cultural differences, millennials versus seasoned firefighters, Fire Service Traditions versus New Fire Service Trends) who use a high sense of “calling” to serve in the profession as a predictor of burnout and PTSS which can lead to various levels of PTSD.

The most current research reviewed in this chapter failed to demonstrate a clear connection between individual resilience and PTSS with inferred occupational resilience as a norm. Although PTSS, suicide ideation and resilience are common concepts in the realm of fire service data, resources are lacking in prevention and educative initiatives pre-incident, as well as post-incident response protocols and programming. Much of the literature focuses on the importance of communal support coupled with individual resilience but lacks the initiative to

identify actual needs for firefighters that enact cultural change and shift silence to vocal newness for firefighter behavioral health care.

### **Critique of Previous Research**

The current evidence and claims from the literature review hold merit, based on the minimal amount of research that has been conducted in the fire service on the relationship between resilience, PTSS, suicide ideation and locus of control. One of the motivating factors for this research project is how present research identifies PTSD for firefighters, in spite of allowing traditionalism to dictate lack of movement toward firefighter behavioral health. A primary critique of current research lacks understanding of fire service culture, traditionalism and current trending in how the fire service embraces change as well as the PTSD epidemic sweeping the fire service. The American Fire Service is lacking research for firefighters with PTSS as the majority of references and data were from other countries, leaving the American Fire Service in a conundrum with a growing, exposed fracture of mental and emotional health. For foundational research purposes, these references serve as a springboard for future research in a number of fire service behavioral health arenas. Pao and Tran (2017) want to know why some firefighters are better able to cope with trauma compared to others. This question identifies the need for this dissertation to identify what role does individual resilience, as well as formal and informal resources of behavioral health support, play in mitigating the impact of traumatic events.

### **Chapter 2 Summary**

Due to gaps in previous research, there is sufficient reason for thinking that an investigation examining the impact of individual resilience as well as formal and informal resources of behavioral health support play in mitigating the impact of traumatic events would

yield socially significant findings for the relationship between firefighters and suicide ideation. I can, therefore, claim that the literature review has provided strong support for pursuing a research project to answer the following multi-part research question: What is the nature of individual resilience, how does individual resilience coupled with formal and informal resources of behavioral health support mitigate the impact of traumatic events, and how are firefighters lived experiences relying on individual resilience for firefighters with behavioral health issues?

### **Chapter 3: Methodology**

The national fire service is facing new challenges based on occupational behavioral health hazards as firefighters are increasingly identifying with PTSD symptoms (Pao & Tran, 2017). The primary goal of this interpretative phenomenological study was to recognize how individual resilience relates to lived experiences for firefighters who may need next-level behavioral health care, which in turn, would identify higher “at risk” firefighters with suicide ideation who needed increased mental and emotional care outside of peer interventions. This interpretive phenomenological study served as a platform to navigate complex, ambiguous, and emotionally-laden life experiences of firefighters on its own terms instead of using pre-existing presuppositions. Specifically, the research helped identify organizational needs for fire service personnel through lived experiences of firefighters which in turn, identified best practices for firefighter behavioral health needs where occupational resilience is insufficient and suicide ideation is captured, communicated, and confronted for firefighters who need next-level care.

Qualitative research methodology provided the most meaningful data to understand a firefighter’s individual ability to rebound from repeated traumatic event exposures and/or exposure to a categorized “high behavioral health risk, low frequency” emergency call as fire service leaders can alter the quality of experience in behavioral health issues facing firefighters with cultural change initiatives (Pietkiewicz & Smith, 2012). This particular study was significant due to the lack of research (especially qualitative) in the fire service for behavioral health of firefighters, coping mechanisms, identification of PTSS and which emergency call type posed an increased threat to firefighter suicide ideation. Behavioral health concerns are on the rise within the fire service with an increased focus from concern to illness, which shifts as a firefighter’s normal function is compromised due to signs and symptoms related to PTSD (Mayo

Clinic, 2015). In a study performed and recorded by the Centers for Disease Control and Prevention (2012), 4,022 firefighters and medics were asked to participate in a quantitative survey. Of the 4,022, 6.6% had attempted suicide and 37% (1,383) had contemplated suicide. Dill, Douglas, and Heyman (2017) reported that PTSD and depression rates among firefighters and police officers have been found to be as much as five times higher than the rates within the civilian population, which causes these first responders to commit suicide at a considerably higher rate (firefighters: 18/100,000; police officers: 17/100,000; general population 13/100,000). Even when suicide does not occur, untreated mental illness can lead to poor physical health and impaired decision-making.

The fire service commits an enormous amount of time, money, and research to prevent cardiac medical issues and various forms of cancer for firefighters in response to fire station lifestyles as well as traditional fire ground practices (Dill & Loew, 2012). Fire service leaders tend to focus on behaviors instead of the underlying issues that are driving behaviors and in return, actions are seen far more readily than the forces behind them (Patterson et al., 2013). The fire service is tasked with critical decision-making where lives depend on scene commanders to perform constant risk assessments to predict the best possible outcomes. When decision-making is compromised, consequences are far-reaching from emergency responders to citizens throughout the fire service where survivor's guilt, feelings of fear, and triggering mechanisms create recall from previous traumatic experiences and can become problematic for future decisions in stressful situations (Dill & Loew, 2012). The crux of the issue was exposed from a 2017 study that identified 103 firefighters who died by suicide in comparison to 93 line-of-duty deaths out of 1,215,300 personnel, which includes career, volunteer, and paid per-call firefighters (Dill et al., 2018; U.S. Fire Administration, 2018).

The overarching theoretical framework used the lens of interpretivism (constructivism) through social action theory, which focused on the role of the active individual and interactions between people by shaping personal identity to better understand human actions and responses in life experiences. Qualitative research uncovered the interviewed firefighters' motives for how each individual responded to traumatic events (resilience), how each individual coped with PTSS, and what emergency call type or triggering mechanism led some to suicide ideation. Creswell (2009) stated,

Social constructivists believe that individuals seek understanding of the world in which they live and work. Individuals develop subjective meanings of their experiences – meanings directed toward certain objects or things. These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories or ideas. (p. 8)

This study looked for the complexity of views from 6–12 firefighters as they shared their lived experiences and individual resilience involving traumatic events in their fire service careers.

Interpretive phenomenological analysis identified how firefighters made meaning of resilience as it relates to occupational stresses associated with being a firefighter (Creswell, 2013). This chapter identifies the research questions, purpose of the study, hypotheses, research design, population and sampling method, instrumentation, data collection, operationalization of variables, data analysis procedures, limitations and delimitations of the research design, internal and external validity, expected findings, ethical issues in the study and concludes with a chapter summary.

## **Research Questions**

- What are the lived experiences of first responders who have experienced traumatic emergency calls?
- What does it mean to be resilient as a first responder?
- What resources, trainings, and strategies are most effective for leadership to recognize in countering behavioral health needs in the fire service?

## **Purpose of the Study**

The purpose of this research was to recognize how individual resilience relates to lived experiences for firefighters who may need next-level behavioral health care, which in turn, will identify higher “at risk” firefighters with suicide ideation who need increased mental and emotional care outside of peer interventions. The fire service is ill prepared for behavioral health (mental and emotional) initiatives for firefighters who present post-traumatic stress symptoms (PTSS), which can lead to suicide ideation over time due to increased risk resulting from repeated traumatic events or emergency calls as a firefighter (Chung et al., 2015). Behavioral health is an understudied phenomenon in the fire service; therefore, this study sought to discover how individual resilience related to lived experiences for firefighters who may need next-level behavioral health care. Brazil (2017) stated that for firefighters to maintain behavioral and physical wellness to function in their role as emergency responders, it is important to identify preventative care due to the stresses of the job. Unaddressed behavioral health needs may contribute negatively to the overall health of the firefighter, therefore appropriate proactive mediums should be established to address needs accordingly.

The processes of prevention, responsive actions, and continual mitigating mediums for firefighters’ mental and emotional health require further research for standardization throughout

the fire service. This topic reflects my passion, curiosity, desires, and personal connection as an emergency worker and leader, and my hope is that will help brother and sister firefighters struggling with PTSS and thoughts of suicide. The lived experiences of the firefighters in this study captured their perceptions as they related to life events in their personal world. Milligan-Saville et al. (2017) reiterated how emergency responders are ideal subjects of study due to the nature of their work mitigating traumatic events, as both physical and mental health dictate the ability to perform under stressful factors. As exposure to traumatic events compile over a fire service career, the behavioral health burden increases which could affect how firefighters rely on individual resilience to cope with symptomatic responses.

Milligan-Saville et al. (2017) performed direct observation interviews which provided data through individual narratives that linked “exhaustion” to a specific repeatable emergency call that fits “high risk, low frequency or high risk/high frequency call type” where occupational resilience is insufficient, resulting in strong support of post-incident response programming for firefighters. The fundamental question centers on *what* role did individual resilience as well as formal and informal resources of behavioral health support play in mitigating the impact of traumatic events. By studying the lived experiences of firefighters, resources, trainings and strategies, guidance for firefighters can be developed dealing with long-lasting effects of PTSD, including suicide ideation.

### **Research Design**

Interpretive phenomenological analysis (IPA) was the research design of choice as it captured significant, dynamic lived experiences of the participants and allowed for active involvement of the researcher to empathize with the participants through their lens by making sense of their personal world with interpretive analysis. Eatough and Smith (2017) stated that

IPA has had a short life span yet lengthy qualitative history. IPA research considered the experiences in health and counseling psychology which considers an increased understanding of the phenomena from a first-person perspective where value is placed on the subjective interpretation of the data for new ways of thinking.

Smith and Osborn (2007) stated,

The aim of interpretative phenomenological analysis (IPA) is to explore in detail how participants are making sense of their personal and social world, and the main currency for an IPA study is the meanings particular experiences, events, states hold for participants. (p. 53)

By studying the lived experiences of firefighters, best practices for fire service behavioral health needs emerged, thereby providing information to identify, reduce, and/or eliminate suicide ideation, recognizing that all firefighters are vulnerable to it. To maximize the diversity of the sample group relevant to the research question, sociodemographic identifiers explained the phenomena in relation to individual resilience and the identifiers.

Eatough and Smith (2017) explained,

IPA is committed to clarifying and elucidating a phenomenon (be that an event, process or relationship) but its interest is in how this process sheds light on experiences as they are lived by an embodied socio-historical situated person. Rather than transcend the particular, IPA aims to grasp the texture and qualities of an experience as it is lived by an experiencing subject. (p 3)

The qualities and details of traumatic experiences lived by firefighters provided insight for the researcher in relation to individual resilience and how each firefighter made meaning of

resilience, the traumatic event, and mitigating factors as each person makes sense of the experience, before, in the midst of, and afterwards.

Since experiences are subjective and associated with a phenomenon, the lived experiences of firefighters and traumatic events were contextual and through direct observation. These observations captured the beliefs, motivations, thoughts, and feelings of individual ownership and coping mechanisms for each individual. An idiographic approach collected a range of experiences for firefighters which are contextually bound over a multitude of occasions, years, emergency call types and involve different resiliency levels. In particular to each person's phenomena of interest, which identified a new view through the lens of firefighter behavioral health, this affirmed central themes in the lives of firefighters which brought the researcher closer to individual uniqueness with commonalities of firefighter needs and responses to traumatic events.

### **Target Population, Sampling Method, and Related Procedures**

The target population consisted of firefighters, both male and female, based on education, rank, and tenure in specific stages of their fire service career (5–24 years of service). Firefighters from three different fire departments participated in a direct observation interview that engaged their life experiences from personal accounts of events with an empathetic stance from myself, the interviewer. For this study, primary concern centered on appreciation for each participant's life experiences that provided an in-depth examination of the phenomena between individual resilience and how formal and informal resources of behavioral health support mitigate traumatic events. The participants were selected purposely to secure relevance to the problem facing firefighters and behavioral health concerns where researcher and interviewee could engage in rich dialogue should further questions become necessary (Pietkiewicz & Smith, 2012). Letters,

emails, and consent forms with explanation and intent for participant recruitment and study description were sent to the Fire Chief of two different fire departments requesting 15 participants picked by the Chief. A sociodemographic identifier was provided as a participant recruitment tool for each Fire Chief to the two fire departments in the area. Nine sociodemographic identifiers were returned to the researcher and these nine people became the participants for the study. The Fire Chiefs were not aware of who the researcher chose to interview and the researcher emailed the participants back with a time, date, and location of the interview. Each of the selected firefighters was presented with a description of the interview process as well as had an opportunity to meet with the researcher prior for project involvement clarification.

### **Instrumentation**

The primary instrumentation was a live interview comprised of four questions read aloud, recorded, and typed into a document. Each question prompted the participant to describe their lived experiences through a personal lens while relying on researcher interpretation of the firefighter's mental and emotional responses. IPA focuses on details from the individual, not generalities of populations, but purposeful sampling with a closely defined group, such as firefighters of four different ranks (Smith & Osborn, 2007). Four questions were asked to each respondent for a semi structured interview where I established a rapport, expanded on interesting ideas from the respondent, and focused on the respondents concerns regarding their responses. Smith and Osborn (2007) share how semi structured interviews “facilitates rapport/empathy, allows a greater flexibility of coverage and allows the interview to go into novel areas, and it tends to produce richer data” (p. 59). See Appendix A for interview questionnaire.

## **Data Collection**

The primary concern of an IPA researcher is to elicit rich, detailed, and first-person accounts of life experiences and phenomena through the lens of each individual to gain true meaning in the designated contexts (Pietkiewicz & Smith, 2012). Detailed, first-person accounts were accomplished through direct observation interviews with researcher field notes and prompting questions to gain deeper insight into personal experiences of significance. The interview questions sought to gain thoughts, memories, and associations within the lived experiences of traumatic events and how individual resilience through personal interpretation played a role in informal and formal mitigating circumstances as firefighters.

## **Field Notes**

Field notes chronicled the behaviors, events, and responses of the participants during the live interview by myself, the researcher. My field notes contained specifics such as date, time, location and details of participant firefighter responses through direct observation. Field notes provided immediate reflective understanding of the lived experiences of firefighters and could prompt additional questions between the interviewer and interviewee while emergent themes develop. Once the interview concluded, each set of field notes was attached to the participant's interview data sheet and filed under the proper rank of each firefighter in a secured binder until the analysis process.

## **Recruitment and Interview Process**

- Once IRB approval was granted, letters to two Fire Chiefs were emailed with a brief description of the study.

- A sociodemographic identifier was provided as a participant recruitment tool for each Fire Chief to the three fire departments in the area. There was no possibility of me, as a Battalion Chief and researcher, knowing the participants or supervising them.
- The sociodemographic identifier consisted of age, gender, rank, tenure and education level, with a qualifier of 5–24 years of service. The Fire Chief emailed the identifier to their employees with specific instructions for interested participants to email their responses directly to me as my email was provided in the description letter.
- I chose nine firefighters (number of actual respondents) which covered each rank to interview based on the sociodemographic identifier (Firefighter, Driver/Operator, Company Officer, Chief Officer) which fell into a tenure range of 5–24 years of service. I was aiming for 6–12 participants to interview between the two fire departments. Each participant would receive a consent form that explained the study and their participation in it. Names were not necessary and each participant was identified as the following,
  - Firefighters were identified as “A 1,2,3”
  - Driver Operators were identified as “B 1,2,3”
  - Company Officers were identified as “C 1,2,3”
  - Chief Officers were identified as “D 1,2,3”
- Each participating firefighter emailed me back as the identified participant, utilizing the identifier above such as “Company Officer” in the subject heading of their email. A two-week window to schedule interviews with each fire department was created and each participant made an interview appointment as their schedule allowed.

- An email was sent to each of the three fire department secretaries with the scheduled dates and times for the interviews.
- Only the participants knew who was picked for the interview by my confirmation email to each participating firefighter, with the date, location, and time of the interview.
- A conference room at the Fire Administration Building was used for the interviews, which firefighters in each organization were familiar with.
- The setting consisted of a conference table, chairs, plenty of light, the list of interview questions, a brief description of the study, the signed consent form, paper and pen for field notes, bottled water, and one recording device.
- The interview began with a brief explanation of the study and each participant was asked “Are you ready to begin?” before the first question was asked.
- The interview concluded after the last question and the recording was then stopped. Each interview lasted approximately 1–2 hours.
- Arrangements were secured for post-interview counselors if necessary for each participant.

### **Data Analysis Procedures**

My storyline, or purpose of the study, was to recognize how individual resilience related to lived experiences for firefighters who might need next-level behavioral health care, which in turn, would identify higher “at risk” firefighters with suicide ideation who needed increased mental and emotional care outside of peer interventions. Utilizing an emic perspective would provide the researcher protection and capitalize on how firefighters thought, felt, and reacted to traumatic events as I, the researcher, lived through their lived experiences (Pietkiewicz & Smith,

2012). Emerging themes moved data to a clearer description of the experiences that firefighters underwent so the reader would gain a deeper insight into the relationship of resilience, PTSS, suicide ideation and accepted Fire Service norms (Creswell, 2013). Once the direct observation interviews were recorded and concluded, I transcribed the recording into written form for each participant's response to the same questions, which in turn, produced a participant narrative. Each participant was given a list of professional contacts who specialized in behavioral health for first responders as well as additional self-assessing resources to be used at the participant's discretion. My aim was to produce a detailed set of notes from the interviews with a descriptive account of each participant's meaning of their lived experiences.

Data analysis consisted of detailed field notes from the interview as well as a line-by-line analysis of understandings, commonalities, concerns, relationships and nuances that developed into clustering and thematic patterns, which led to processes and final structural themes (Smith, Flowers, & Larkin, 2009). For process purposes, I described the personal experiences of the sample group while incorporating the phenomenon under study with a list of significant statements and emerging themes from the study, focusing on "what" the firefighters experienced, the context of the experience, the language used by the firefighters and by identifying potential concepts that make sense of their experiences (Creswell, 2013).

The language used by the participants was broken down into three distinct comment coding areas of descriptive (describing the content), linguistic (specific use of language), and conceptual comments which funneled into emergent themes that were identified by underlining text, phrases, or specific words that seemed important (Smith et al., 2009). The final report served a dual role to include the participant's account of lived experiences as firefighters and my interpretation of the participant's lived experiences offering new insights into firefighter

behavioral health (Pietkiewicz & Smith, 2012). Smith et al. (2009) stated, “the main task in turning notes into themes involves an attempt to produce a concise and pithy statement of what was important in the various comments attached to a piece of transcript” (p. 92). A final paragraph captured implications from the study and identified future needs for further development and evaluation based on fire service needs assessments. Due to the nature of this particular study, little qualitative research had been conducted previously, therefore, I recommended a pilot study to seek objective opinion as to how questions could be made easier to understand, avoid bias and remove any potential ambiguity.

### **Reflexivity**

Reflexivity was used to maintain unbiased practices since I, as a firefighter with the rank of Battalion Chief, was also the researcher initiating this study due to the lack of research within the fire service. Governed by theoretical foundations, coupled with intentional research questions, I, as a reflexive researcher, engaged knowledge as the data spoke for itself through thematic discoveries from individual explanations of real-life experiences (Burawoy, 1998). As the primary researcher, I used a heightened sense of sensitivity due to the nature of the study. At no point was I, as the researcher and firefighter, supervising or working alongside the participants or the other chiefs from the three fire departments.

### **Limitations and Delimitations of the Research Design**

The study was delimited to firefighters of different ranks, tenure (years of service), gender, education levels and age to provide a diverse sample size that would relate life experiences with occupational experiences that would in turn give a complete perspective as to how individual resilience related to PTSS and traumatic events as a firefighter. Both limitations and delimitations could have affected the study based on instrumentation, sampling, time

constraints and boundaries chosen by the researcher such as setting, context and instrumentation. The selection of firefighters was intentional to better gauge, through sound research, how firefighters at different stages of their careers approached behavioral health issues based on individual resilience, locus of control and PTSS associated with emergency call types. The study was not intended to cover the psychoanalysis of firefighters, the treatment needs of firefighters based on symptomatic response, or the diagnosis of firefighter behavioral health. The study was intended to identify (through interview research questions) how individual resilience can predict the effect of PTSS on firefighters, therefore identifying firefighters who may need next-level behavioral health care who have considered suicide.

Based on the research questions, pre-incident edification programs and post-incident debriefing needs were identified that will aid further research and program development for the fire service to better educate and identify how specific emergency call types are more likely to contribute to behavioral health issues for firefighters based on variables such as rank, tenure (years of service), gender, education level, and age. Another delimitation of the study centered on qualitative research inquiry due to the lack thereof within the fire service for firefighter behavioral health in regards to PTSS. Multiple literature reviews primarily utilized quantitative methods that I chose to integrate into this study based on resilience, locus of control, PTSS and suicide. The setting for interviews was at the kitchen table of the fire station since the majority of “real” conversations occur around the table as a “safe” place for firefighters to share thoughts, experiences, concerns, and possible areas of weakness. During the interviews, only myself and the individual being interviewed were present so the participating party would feel comfortable with confidentiality.

The instrumentation utilized three interview questions related to individual resilience:

1. How firefighters coped with PTSS after a traumatic emergency call.
2. How they received behavioral support from their fire department.
3. How firefighters made the decision to ask for help.

The overarching theoretical framework used the lens of interpretivism through social action theory. Social action theory framed how firefighters are valued individually and interpretive phenomenological analysis identified how firefighters made meaning of resilience as it relates to occupational stresses associated with firefighter experiences. I intentionally based the theoretical framework from an interpretivist perspective to remove personal experience bias away from the research and instead, relied on the sample groups based on sociodemographic identifiers, to gain insight into behavioral health needs and necessary fire service responsive actions for the future.

Limitations for this study were sample size, time constraints (longitudinal effects), lack of prior research, self-reported data (qualitative study) and bias due to being the researcher and a member of the fire service who cares deeply about this topic. To minimize the limitations and increase the validity of the research, triangulation, reflexivity, and thick and rich description of the firefighters being interviewed were all measures that strengthened the credibility of me and my research. Reflexivity encouraged the passion I have for this study due to personal ties in the fire service but allowed for accountability for myself between the research and being the researcher while thick and rich description capitalized on the experiences of other firefighters to drive the data.

Just as a level of occupational resilience is assumed in the fire service for personnel, so is credibility, honesty and trustworthiness when firefighters respond to emergency medical calls, fires, rescues and every call type in between that the public can not correct themselves (Deppa,

2015). Another limitation that strengthened the credibility of the study was the personal attachment and credibility of researcher reflection, recognizing the personal stake in firefighter behavioral health as a Chief Officer in the fire service. Having lost a close friend to PTSD in the fire service, my personal reflection drove the study while the data from other firefighters drove the research and analysis so we, as the fire service, can better prepare our firefighters before, during, and after an incident when individual resilience may not be sufficient for firefighter behavioral health care. An accurate protective measure of IPA to help limit personal bias relies on participant-led or participant-oriented data collection and infuses researcher interpretation of the lived experiences, which is a collaborative product of participant and researcher (Smith et al., 2009). I came to this research with my own biases, tenure in the fire service, personal accounts with firefighters, recognition of fire service cultural issues and the need for proper responsive programs for firefighter behavioral health, recognizing that the lived life experiences of firefighters gave rich insight for fire service needs.

### **Internal and External Validity**

Instrument validity (interview questions) for this study was reviewed by my dissertation committee as well as the IRB for proper deployment within the structure of IPA which provided necessary framework for delivery of interview questions that focused on the lived experiences of firefighters within a common context. The literature review helped contextualize the interview data to explore available resources that aided in making sense of the topic (Smith et al., 2009).

Price (2000) stated,

A study that readily allows its findings to generalize to the population at large has high external validity. To the degree that we are successful in eliminating confounding variables within the study itself is referred to as internal validity. External and internal

validity are not all-or-none, black-and-white, present-or-absent dimensions of an experimental design. Validity varies along a continuum from low to high. (para. 1)

This study presented a high external validity since fire service trending across the country has identified PTSD for firefighters as problematic with consistent uncertainty for proper response to firefighter behavioral health conditions, as well as utilizing IPA as the methodological framework.

The study focused on individual resilience; therefore, a high external validity was further supported since life experiences for firefighters within the fire service as well as outside the fire service have contributed to a firefighter's ability to bounce back from a traumatic event based on individual resilience therefore, utilizing replication logic of the firefighters in the study.

### **Expected Findings**

The researcher is a veteran member of the fire service (currently serving at the rank of Battalion Chief) who has been personally affected by specific emergency call types over a 22-year career. As a phenomenological researcher utilizing IPA, personal bias was removed by capitalizing on life experiences of the sample group. The literature reviews and previous research provided strategic perspective that contributed to resilience, locus of control, recognition of PTSS and correlations to suicide ideation. There were gaps in the literature review research between the overall relationship with individual resilience and the effect of PTSS in firefighters based on emergency call type, which "firefighter type" was more susceptible to suicide ideation (based on sociodemographic identifiers), and what firefighters actually needed for post-debriefing mediums.

As the researcher, I expected to discover emerging themes that identified which variables (rank, tenure, gender, education level, and age) in conjunction with individual resilience

measures, provided the greatest insight into firefighters who may need next-level care due to suicide ideation as these factors relate to emergency call type and frequency. As the researcher, I anticipated tangible feedback from firefighters that would aid in program design and development for relatable post-incident debriefing methods as well as pre-incident edification initiatives. As the researcher, I expected new knowledge to fill gaps in past research that better identified methodology and time frames for PTSS identification and communication for firefighters as annual screening practices and after an identified emergency call type that fit the categorical framework of re-experiencing, avoidance and arousal.

### **Ethical Issues in the Study**

Firefighters who fit the requirements for the interview might not have felt safe to answer honestly for fear of punitive repercussions, even though the process adhered to confidentiality. One way this risk was minimized was to choose three surrounding fire departments and not use anyone within my organization. As the lead researcher and interviewer, an advantage to my tenure in the fire service as well as my researcher role was how I was able to empathize with firefighters based on personal experience and credibility within the fire service due to lack of scholarly research from a firefighter. Each participant in the interview received a brief description of the study and a consent form (see Appendix B) and was asked if there were any questions before beginning the interview. To create an atmosphere of honesty and trust, interviews were conducted individually as the goal was to create an atmosphere of openness and candid responses through the lens of firefighter traumatic event experiences. Participants from all ranks were encouraged to share openly and allow vulnerability to shape their responses, even if there was trepidation based on fire service traditions and lack of understanding on this topic.

**Data storage.** For protection, all data was stored safely in a fire safe in my office on a flash drive and no names were used; the participants were only identified by rank in the fieldnotes. All recordings were transferred to a computer then to a flash drive to be stored in a fire safe. All data were kept confidential and will be destroyed after a three-year period. All field notes (original and updated) are locked in a fire safe with the consent forms to be kept for a period of three years. At the end of three years, all data will be destroyed.

**IRB approval process.** As the researcher, I submitted the proper documentation with justification for my study to the IRB. I received feedback to create a comprehensive plan for the participants due to the nature of the study involving behavioral health. I updated the approval forms with a clear plan as well as consent form which identified process and people should any participant require additional support after the interviews. The IRB approved my research project and I moved forward in the process of data collection through interviews of firefighters, driver operators, company officers and battalion chiefs.

**Conflict of interest.** Part of researcher bias stemmed from personal connectivity to such a sensitive subject within the fire service, especially with recognition of fire service culture, loss of a friend to PTSD, and my role as a leader within the fire service who fully recognized the lack of behavioral health support in the fire service. In order to separate bias from research, protective measures such as inquisitive questioning, reflexivity and relying on firefighter personal experiences with solid theoretical framework within IPA strengthened the study. Due to confidentiality measures, trusting the researcher intent, and communicated reassurance, conflicts of interest were lessened as participants shared openly and honestly during the interviews.

**Researcher's position.** As the researcher, my position was one of transparency, passion, and trust with the participants. As a fire service professional, I recognized this topic challenged the participants to share experiences that possibly had never been discussed. Throughout my career in the fire service, peer one-on-one dependency was the primary informal medium utilized during traumatic event behavioral health mitigation. I felt that as both researcher and internal stakeholder, appropriate methodology was paramount as well as applicability of findings that could be enacted right away as standard practices. From my perspective and position, I was able to empathize with the participants which led to further questions within the formal interview. My experience in the fire service proved helpful to validate, empathize, and extend conversation pieces that provided a trusted atmosphere between researcher and participant.

### **Chapter 3 Summary**

The purpose of this research study was to recognize how individual resilience related to lived experiences for firefighters who may need next-level behavioral health care, which in turn, would identify higher “at risk” firefighters with suicide ideation who need increased mental and emotional care outside of peer interventions. This study identified fire service cultural shifts to meet organizational needs for fire service personnel through pre-incident edification techniques as well as post-incident responsiveness for firefighters who displayed PTSS from traumatic emergency call types where occupational resilience was insufficient and suicide ideation was captured and communicated for firefighters who need next-level care. Literature reviews and qualitative research served as the primary means of data gathering by recruiting firefighters for direct observation interviews.

IPA was used as the research design of choice as it captured significant, dynamic lived experiences of the participants and allowed for active involvement of the researcher to empathize

with the participants through their lens by making sense of their personal world with interpretive analysis. Due to the sound IPA framework, relevant research questions and field notes, themes emerged that contributed to creating best practices for fire service behavioral health needs, thereby providing information to identify, reduce, and/or eliminate suicide ideation, recognizing that all firefighters are vulnerable to suicide ideation. To maximize diversity of the sample group relevant to the research question, sociodemographic identifiers explained the phenomena in relation to individual resilience and the identifiers. Each person's phenomena of interest, which identified a new view through the lens of firefighter behavioral health, affirms central themes in the lives of firefighters which brought the researcher closer to individual uniqueness with commonalities of firefighter needs and responses to traumatic events, thereby educating firefighters of behavioral health concerns and providing mitigating factors to reduce suicide ideation and attempts.

## Chapter 4: Data Analysis and Results

The purpose of this study was to recognize how individual resilience related to lived experiences for firefighters who may need next-level behavioral health care, which in turn, could identify higher “at risk” firefighters with suicide ideation from traumatic events. The fundamental research question centered on *what* role did individual resilience, as well as formal and informal resources of behavioral health support, play in mitigating the impact of traumatic events for firefighters. I utilized interpretive phenomenological analysis to analyze the data to make meaning through translation of repeated exposure to painful situations which related PTSS to suicide ideation, in addition to emergency call types that inhibit symptomatic responses (Pietkiewicz & Smith, 2012). Qualitative research was conducted to capture the essence of the lived experiences by firefighters in relation to traumatic events by examining their resilience, coping mechanisms after a traumatic incident, decision-making triggers to ask for help, and what mediums their current organizations utilized for employee assistance. This study filled gaps in current research and provided answers to the following research questions:

### Research Questions

- What are the lived experiences of first responders who have experienced traumatic emergency calls?
- What does it mean to be resilient as a first responder?
- What resources, trainings, and strategies are most effective for leadership to recognize in countering behavioral health needs in the fire service?

Interpretive phenomenological analysis was used and captured significant, dynamic lived experiences of participants and allowed for active involvement of the researcher to empathize with the participants through their lens by making sense of their personal world with interpretive

analysis. Eatough and Smith (2017) stated that IPA provides an increased understanding of the phenomena from a first-person perspective where value is placed on the subjective interpretation of the data for new ways of thinking.

Smith and Osborn (2007) stated,

The aim of interpretative phenomenological analysis is to explore in detail how participants are making sense of their personal and social world, and the main currency for an IPA study is the meanings particular experiences, events, and states hold for participants. (p. 53)

By studying the lived experiences of firefighters, best practices for fire service behavioral health needs emerged. They provided results that recognized that all firefighters are vulnerable to suicide ideation based on emergency call types, formal and informal support, and the need for proactive responsive actions by fire service leaders to better ensure firefighters receive the behavioral help they require for a full life inside and outside of their job. Each firefighter's brain interprets a traumatic event, which may be different for each individual to feel normal, validated, and possibly concerned of the effect of an incident (Glenn, 2017).

I discovered a deeper sense of interpretation as I utilized IPA which framed the analysis into descriptive, linguistic, and conceptual themes by organizing findings which funneled into emerging themes from four ranked positions within the fire department of firefighter, driver-operator, company officer, and chief officer. My role as principal investigator was intertwined with a passion for the fire service as a leader and chief officer, a motivated commitment to prevention of losing brother and sister firefighters to suicide, and vested interest in personal and professional guidance to cope with traumatic experiences. My findings created intentional practices which foster a culture of courage to share, listen, validate, and normalize the human

aspect of being a firefighter before and after the emergency call. After losing a friend to PTSD, my personal motivation was to discover how individual resilience relates to the lived experiences of firefighters in relation to traumatic events so I could identify necessary steps to better educate fire service leaders for preventive actions, post-incident conversation mechanisms, and follow-up care for our firefighters outside of peer interventions. As the researcher, I chose IPA to capture the rich, detailed lived experiences of firefighters within an intimate setting of sharing, caring, and normalization of thoughts and feelings in relation to traumatic experiences. My role in data collection and analysis was to create the research questions, identify prompting interview questions, discover deepening conversation pieces with the participants, and utilize methodology to fit the level of intimacy and information relationship for the study. From the openness and transparency of the participants, I was able to immediately apply thematic findings in my role as a chief officer in the fire department for our first responders.

### **Description of the Sample**

The sample group was comprised of firefighters, driver-operators, company officers, and chief officers, all varying in gender (two females, seven males), tenure (5–24 years), rank, and education levels (see Table 1). My goal was to interview 12 participants, as recommended by Smith et al. (2007), but I finished with nine participants, potentially due to the subject matter where some trepidation for involvement could exist. The population was exactly what I had anticipated from shift firefighters although I would have liked administrative chief representation. All participants answered the interview questions, which spurred additional questions from their initial responses, which captured an intimate, in-depth look into their lived experiences. I interviewed 4 different ranks within the fire department as each rank provided insight through their lens of experiences.

## **Brief Rank Descriptions**

The firefighter position is the “workhorse” of the crew to pull hose, extinguish fire, perform rescues, use extrication equipment, perform patient care on medical emergencies, and is under the command of the company officer. The driver operator is responsible for ensuring the apparatus equipment is checked and operational, drives the apparatus to the scene, ensure a water supply is established, pumps the fire apparatus so the firefighters can extinguish the water (hydraulics), and is under the command of the company officer. The company officer is responsible for a single resource (engine or ladder truck), the safety of the crew, functions as the first line supervisor for training, accountability, policy enforcement, incident mitigation, report writing, and reports to the battalion chief (shift commander). The battalion chief supervises the entire shift of company officers, driver operators, and firefighters and is responsible for the daily operations of the shift. The battalion chief functions as command over incidents so the company officers can lead their crews and report back resource needs to the battalion chief. The battalion chief has increased administrative roles and serves as a conduit from line personnel to fire administration, responsible for daily staffing, payroll, and critical decision making on larger incidents involving a multi-company apparatus response. Each rank requires base line certifications, education, and experience to qualify for hire or promotion.

Table 1

*Sample Participant Group*

Gender	Rank	Tenure (years)	Education Level
Female	Driver Operator	22	Associates Degree
Male	Driver Operator	7	Some College, No Degree
Male	Battalion Chief	11–20 years	Some College, No Degree
Male	Battalion Chief	16	Associates Degree
Male	Battalion Chief	20	Associates Degree
Female	Firefighter	19	Associates Degree
Male	Firefighter	5–10 years	Associates Degree
Male	Company Officer	23	Associates Degree
Male	Company Officer	18	Some College, No Degree

**Research Methodology and Data Analysis**

In order to fully understand and gain insight utilizing IPA to its fullest, I focused on the first case (demographic group) in detail, immersing myself in my fieldnotes from the interview by reading and re-reading as well as listening to the recordings of the interviews. I recorded the descriptive, linguistic, and conceptual findings to engage the data in a coordinated, organized fashion where generic descriptions merged into conceptual findings from pattern developments. Themes from each ranked position emerged into descriptive, conceptual, and linguistic patterns which provided rich personal accounts from the lived experiences of firefighters. Eatough and Smith (2017) explained,

IPA is committed to clarifying and elucidating a phenomenon (be that an event, process or relationship) but its interest is in how this process sheds light on experiences as they

are lived by an embodied socio-historical situated person. Rather than transcend the particular, IPA aims to grasp the texture and qualities of an experience as it is lived by an experiencing subject. (p. 3)

By utilizing IPA, I was allowed to experience how firefighters responded to traumatic events, which re-shaped my presuppositions and provided new understanding from the firefighter participants' points of view.

In this study, the data collection process included in-depth one-on-one interviews for each individual to share their detailed accounts of traumatic events as firefighters. The following documents were used for data collection and analysis purposes:

- Sociodemographic Form (see Appendix I): The researcher sent this form to area Fire Chiefs to solicit participants in the study with 5–24 years of experience in the Fire Service.
- Interview Guide (see Appendix A): The interviewer asked four distinct questions to each individual participant after which additional questions were asked and discussed between the interviewer and participant.
- Observational Field Notes Summation (see Appendices C, D, E, F, and G): During the interview, the interviewer wrote down participant responses, noted body language and emotional reactions throughout the interview process. From these detailed notes, descriptive, conceptual, and linguistic themes emerged and were identified.

The entire process occurred in a setting where the participants were comfortable, familiar, and at ease. The interviews took place in conference rooms at their Fire Administration Building as these areas provided a conducive environment to disclosing confidential information.

**Data Analysis IPA Protocol.** Flowers, Davis, Larkin, Church, and Marriott (2011) pointed to the consistency of the data analysis process and stated that IPA involves “iterative processes of reading, exploring, coding, reflecting, interrogating, integrating and, eventually, thematizing” (p. 1380). The researcher utilized IPA to capitalize on the rich description given by each firefighter as they experienced traumatic events coupled with mitigating mediums to aid in processing the impact. In this study, the researcher addressed the analysis by following Smith’s (2009) recommendations to explore, code, reflect, and thematize findings into conceptual, descriptive, and linguistic responses:

*Stage 1.* Initially, the analysis began by re-listening to the audio recording of the interview responses to verify fieldnote compatibility and re-discovery of missed information during the interview. Additional notes were made and formally written on a fieldnote form with descriptive, linguistic, conceptual and emerging theme headings. The analysis was based on the rich detailed responses of the participants, which itself was based on specific word usage (linguistic coding), description of intentional content (descriptive coding) and key concepts that were highlighted and reinforced from the participants (conceptual coding) that were relevant to the research questions. Thus, initial coding was established.

*Stage 2.* Thematic analysis was accomplished by grouping coded themes (descriptive, conceptual and linguistic) in relevance to each rank (Firefighter, Driver Operator, Company Officer, and Chief Officer) which highlighted similarities and disparities between the different positions. At this stage, the researcher found emerging themes which allowed theoretical connectivity to the research questions and primary research question of what mediums were utilized to mitigate the impact of traumatic events for firefighters (see Appendix C for Emerging Themes).

*Stage 3.* After the coding process identified emerging themes and the interpretive phenomenological analysis was conducted, the investigator grouped narrative responses (verbatim from the participants) as a narrative summation with a reflexive approach in order to share findings with the participants, which will shape new initiatives discussed in Chapter 5. These emerging themes were formed into cluster groups according to conceptual similarities and formed a relational overtone between descriptive, conceptual and linguistic analysis. Each of these three stages utilized a reflexive approach to capture truth and meaning during the interview process, data analysis process and discovery phase of the research. This process allowed the researcher an opportunity to draw closer to the participant feedback which gave a deep, detailed account of the phenomenon between resilience, behavioral health responsive mediums and how firefighters cope with traumatic events at different ranks.

### **Summary of Findings**

This study proved that individual resilience allows firefighters of all levels to normalize the emergency incident type but they often struggled with the normalization of symptoms and emotional connection due to re-experiencing or emergency incident recall. The role of intervention initiatives can consider resilience and locus of control as predictors and protective factors for PTSS, but the relationship between resilience and PTSD is ambiguous and may rely on distinct traits of a specific population (Onyedire et al., 2017).

**Calling all leaders.** My research addressed gaps in relationship of PTSD and resilience, as well as clarified the ambiguity of specific populations of firefighters by identifying how each rank responded to traumatic events, even with subjective resilient character traits. For instance, Chief Officers utilized post-incident action reviews as a “hook” to identify what the emergency call was, actions taken by firefighters on scene, and the realization of outcomes in spite of job

performance. The “hook” to connect with firefighters on an emotional level centered on performance, protocol and personal responsibility to allow a safe setting for feelings and thoughts sharing. Chief Officers empowered sharing in group settings by being approachable, trusting, validating, empathetic, and willing to describe how they felt following an incident.

When behavioral health care of firefighters is on the forefront of leadership radar, approachable Chief Officers coupled with intentional conversation mechanisms within the hour of a traumatic event will increase the likelihood of courageous sharing when performance is disassociated with the stigma of “weakness.” Findings evolved through my research, which produced detailed descriptions about fire service culture through interviews, analysis, and emerging themes where claims were bound to fire service culture and identifiable change will produce new behavioral health mediums for coping with PTSS, in addition to resilience (Pietkiewicz & Smith, 2012).

**Coding.** The language used by the participants was broken down into three distinct comment coding areas of descriptive (describing the content), linguistic (specific use of language) and conceptual comments which funneled into emergent themes that were identified by underlining text, phrases or specific words that seemed important (Smith et al., 2009). Descriptive coding provided clear statements of each participant’s (firefighter, driver operator, company officer, chief officer) immediate response to the interview questions, in addition to prompted sub-questions within the interview to gain an even deeper, meaningful description of events, reactions, emotions, thoughts and challenges. The linguistic coding served as a “bridge” from person to person to connect similarities and disparities regardless of rank or tenure as seen in the following table.

**Theme 1: Tiered support plan.** Peer support teams will provide appropriate conversation mechanisms after a traumatic call, initiated by the shift commander in an after-action review (AAR) setting. Shift commanders will use familiar after-action reviews with personnel to discuss the call type (research identified specific call types with potential behavioral health triggers), facts of the emergency incident, performance on the emergency call based on training and standard operating guidelines and protocols. Next, the shift commander should infuse a validating statement which connects the realities of emergency calls, share a testimonial from experience to empathize and connect with the group, and offer support mediums should any first responder feel the need to extend the conversation. A trained peer co-op response team (PCORT) from a neighboring fire department, with a predetermined relational memorandum of understanding (RMOU), will spend time with the individuals or groups that may be affected by the traumatic event. Should the trained peer support co-op need additional support, local CISM teams will be contacted for the affected member or group and follow-up initiatives will be set forth for all members potentially affected with an intentional follow-up 7–10 days after a traumatic event. Should a firefighter require additional one-on-one care, a faith-based leader and/or clinician will be contacted for the individual, preferably one with a relational history with the person in need of additional support. See supportive tier process below:

- Peer Intervention (personal)
- Shift Commander Led After Action Review
- Peer Co-Op Response Team, based on Peer Support Relational Memorandum of Understanding
- Critical Incident Stress Management Team
- Faith-Based Leader

- Identified Clinicians/Therapist for Behavioral Health Support
- Retreat Center Referral per Clinician/Therapist

**Theme 2: Education to action.** A heightened sense of awareness and educative initiatives through mentoring from chief officers to company officers will equip the latter to identify possible behavioral health shifts or patterns in his/her crew members, especially after identified emergency call types of behavioral health concerns. Emergency call type findings provide clarity based on the lived experiences that firefighters of all ranks shared in the interview process, therefore giving guidance for fire service leadership to plan accordingly when specific traumatic experiences occur. The more frequent occurrence of the traumatic event (in relation to rank and tenure) resulted in higher internal locus of control for individuals who recognized the normalization of the call as well as the normalization of a symptomatic response, hence increased resilience for these individuals and the ability to better recognize behavioral concerns.

Performing an after-action review is customary in the fire service where after fire and medical calls, conversations are led to identify what the call entailed, what strategic and tactical actions first responders took to mitigate the situation, how policies and procedures aided in the mitigation of the event and what the group learned knowing this call type will occur again. Performing an after-action review in a classroom setting (formal) or in the fire station (informal), focusing on the call type, dispatch information, emergency scene incident priorities, resource management and tactical benchmarks will allow a familiar, non-judgmental setting for first responders to process the incident and mitigating factors involved. The shift commander utilizes the AAR format to connect firefighters from fact to emotion centering on performance, protocol, and personal responsibility for sharing of thoughts and emotions, should the need arise.

A peer support team is recommended by utilizing an interdepartmental peer group with a neighboring fire department to lessen the stigma of judgment. Using a peer co-op response team will also aid in firefighter perception of weakness and how the perception relates to job performance as well as increase openness through trust, empathy, and validation. The peer validation element of behavioral health is critical to the efficiency of edification, encouragement and engagement of firefighters to share openly. Fire department management and leadership must first create a plan based on a standard operating guideline, recruit and train personnel who fit the peer team parameters, and develop a relational memorandum of understanding with neighboring fire departments for a peer co-op response team. See behavioral health initiatives below from education to action:

- Curriculum Development and Implementation
- Pre-Incident Edification Programming for New Hires
- Peer Support Standard Operating Guideline
- Recruit and Train Peer Support Team (Application, Acceptance, Training)
- Post-Incident Response Training (Diffusing)
- Peer Support Relational Memorandum of Understanding
- Peer Co-Op Response Team
- Identify Clinicians/Therapists for Behavioral Health Support

**Theme 3: Intentional leadership.** Fiscal, organizational and behavioral health support from upper management and leadership is paramount for the success or failure of a robust peer support team, behavioral health response plan and the necessary relationships between other fire department peer teams and clinicians who support behavioral health initiatives for firefighters and Emergency Medical Services (EMS) personnel. Chief Officers identified the value in

slowing down, understanding the process, communicating the process from the actual traumatic event to understandable symptomatic responses and normalizing the event itself as part of the job, in fact the worst part of the job (validation to subordinates). One concern from the results focused on the role of Company Officer in relation to burnout. If Company Officers felt unsupported by their Chief Officers or their superiors are unapproachable, the officers will focus on their firefighters by creating safe settings in the fire station for openness, trust, validation and empathy for crew relational integration. This fosters a “sharing” environment for a crew, yet the Company Officer may feel unsupported by her or his supervisors.

Suicide prevention begins with the acknowledgement of the fire service problem with behavioral health, the lack of leadership from the top of organizations to enact change, and the embracing mentality that people can recover from traumatic events through proper healing opportunities (Glenn, 2017). Significant stress and personal connectivity to the stress as a first responder is a reality of the profession where each day, someone’s tragedy or emergency becomes the first responder’s emergency. Training, experience, knowledge, peer validation, mentoring, individual resilience, and occupational resilience aid in coping with the wear and tear of traumatic events. Peer interventions in informal settings are the primary medium firefighters use to share, usually with one person they trust on their crew. Spousal support is another medium but many first responders choose to not share due to a number of factors such as lack of understanding, lack of empathy or the first responder doesn’t want to burden their loved one with the image or pain. First responders are called to serve, sacrifice, and fix problems under extremely stressful situations which turn into the lived experiences, tucked away in their memory and unsure if or when recall or re-experience could create a symptomatic response.

Rationalization of the traumatic event can be different for each person based on individual resilience, support systems, experience and how one chooses to process the event.

**Theme 4: Communicate truth.** The communication of formal and informal resources is particularly important for the firefighter position since firefighters are less likely to report any symptomatic responses from a traumatic event as they are relying on peers and family to recognize seclusion, mood swings, and performance while on or off duty, whether they recognize this or not. Educated peers can help identify behavioral patterns in peers, therefore lessening the judgment and performance relationship within the crew dynamic where mentoring is key to create an empowering environment so the stigma of weakness is replaced with strength through cultural change. Fire service leaders should encourage open dialogue to clarify misconceptions of how fire ground performance relates to the perception of behavioral health needs for firefighters. How a firefighter interprets trauma and is impacted by traumatic events vary from firefighter to firefighter so a “one size fits all” approach is inappropriate for behavioral health needs (Glenn, 2017). For responsive measures after an incident where firefighters may be impacted, my study discovered that male firefighters prefer physical activity after a traumatic incident which helps both physical and behavioral health, whereas female firefighters prefer relaxation to process with minimal distractions. Fire departments should recognize differing coping mechanism between genders and use mediums that allow for connectivity and openness.

**Theme 5: Normalization as the norm.** My study provides new initiatives for the fire service, filling in areas of previous research by specifically identifying formal and informal resources to mitigate the impact of traumatic events based on the lived experiences of firefighters and how their individual resilience and occupational resilience aids in coping mechanisms. Since there are very few academics in the fire service who focus on behavioral health, my

research provides a fresh outlook on fire service cultural recommended changes as well as validates other research that has been conducted from an insider perspective. The fire service community as a whole has been ill-prepared for behavioral health initiatives based on traditionalism, lack of expert research and lack of tailoring programs or plans to support our first responders (Pao and Tran, 2017). Fire Service leaders must recognize that every first responder interprets trauma or a traumatic experience differently and how they are impacted by these events varies from one first responder to the next (Glenn, 2017). My research validated the subjective reality of normalization of traumatic events for first responders based on resilience, support systems, experience levels, rank, tenure, age and gender. The subjectivity of traumatic experience and normalization of the call still identified as a challenge area for firefighters to accept the normalization of symptomatic responses from the traumatic event which elicits an educative response for fire departments to create a plan before and after an identified traumatic call occurs.

My research identified that pediatric emergency calls elicit an emotional or apathetic response that could challenge a first responder to think critically, struggle with recall or have increased call anxiety when same or similar calls are dispatched. This specific call type discovery will aid fire departments with a baseline of appropriate behavioral health actions for their people. My study proves that individual resilience allows firefighters of all levels to normalize the emergency incident type but often struggles with the normalization of symptoms and emotional connection due to re-experiencing or emergency incident recall.

Individual resilience increases over time with experience, which increases recognized occupational resilience, especially when fire service leadership enacts appropriate formal resources of behavioral health support to support the experiences of traumatic events lived by

firefighters and EMS personnel. Fire service leadership should communicate the normalization of call types as well as possible behavioral health responses, explaining the relationship of human element to first responder, back to being human again. Communicating this message is particularly important to new firefighters or medics entering emergency work so they can be educated to embrace healthy coping skills and stress management strategies before, during and after a traumatic event. Occupational resilience will grow over time based on lived experiences and tenure in the fire service, which can help firefighters learn positive coping mechanisms throughout the traumatic event mitigation process.

**Theme 6: Caring community.** An identified gap in current research is the minimal responsive measures to improving internal or external locus of control for firefighters. Boffa et al. (2017) identified the important role of connectivity from peer community as well as professional help to the reduction of suicide ideation and attempt based on the severity of the traumatic event. An increase in mentoring awareness will focus on communal responsiveness, post-traumatic mediums and will prepare peers to identify peer firefighters who may need next-level care based on symptomatic responses. Intentionally responsive mediums of formal mitigation techniques utilizing our peer co-op response team from a neighboring fire department provided a strong external locus of control from a community that can validate, empathize and normalize the symptoms for first responders in need of care outside of peer (one-on-one) interventions. Henderson (2012) shared how people need to hear less about susceptibility and more about our ability to rebound from tragedy and adversity through resiliency, which aids in processing emotional shifts from post-trauma “damage” to post-trauma “challenges.” Trusting relationships, specifically with shift commanders and their company officers with empathetic, supportive messages, will help firefighters rebound from traumatic events and move from

“damaged” to “challenged” as formal and informal mediums mitigate the impact of the traumatic event. Occupational resilience and individual resilience can increase over time through training and experience, thereby aiding in processing the traumatic event (Glenn, 2017). Pennebaker and Smyth (2016) identified that each person becomes their own scientist through self-discovery by writing down traumatic events with thoughts, facts and/or feelings where a person can better process PTSD occurrences. This coping methodology could help firefighters/first responders process the subjective reality which can be different for each person, even though the traumatic event itself was the same.

Henderson et al. (2016) stated, “The fire service has burgeoning rates of suicide, at least in part due to cultural stigma and untreated mental health disorders. Indeed, there is a history of stigma attached to mental health that prevents fire service administration from providing needed resources and firefighters from seeking these resources” (p. 226). Expressive writing, caring communal relationships, and behavioral health programs (pre-and post-incident) can aid in identifying normalized symptoms in firefighters who need next-level care. My research fills the gap that Henderson (2016) mentions by creating a template for fire service leaders to embrace and customize to their fire department and resources. Leaders must be purposeful when enacting change through organizational adaptability, individual motives, and effective workgroups to accomplish tasks that grow the organization as well as people (Schmuck et al., 2012). Task and relational behaviors both shape progress of the leader/follower connection by facilitating strategic, structured goals while connecting relationally and increasing the comfort level of the reciprocal relationship.

Linguistic coding (as seen in Table 2) identified key language responses from the participants where commonalities and disparities increased identification of challenge areas and

areas of common ground among the four ranks. The concepts will help drive change for fire service policy in the form of recommendations (Chapter 5) in relation to emerging themes as the aggregate for further research. IPA specifically capitalized thoughts, memories, associations and individual interpretations through the lens of the participant so I, as the researcher, could gain a deeper understanding of their challenge areas.

Table 2

*Linguistic Frequency Table*

Linguistic Response	Chief	Company Officer	Driver/Operator	Firefighter
Alone	1			3
Weak	1	1	1	
Time	1	1		
Normalization	2			
Seclusion				4
Empathy	1		1	2
Validation				2
Performance	1	1	1	
Family		2		
Mentoring	2			
Approachable		1		3
Peers			1	2
Sharing				1
Angry	1			2
Support	2			
Tradition	1			
Punitive		1		
Ego	1	1	1	
Busy	1	2		3
Faith/Prayer			3	
Relationships		1	2	3
Pediatric	1	2	3	2
Educate	3			1

**Presentation of Data and Results**

From my narrative account of the data and results, connecting themes and important events organized the research as well as synthesized the data from previous research where gaps existed. The fundamental question centered on *what* role did individual resilience, as well as formal and informal resources of behavioral health support, play in mitigating the impact of traumatic events? Primary research questions in support of the main research question helped

provide further insight into the lived experiences of first responders who have experienced traumatic emergency calls. They are as follows,

- What are the lived experiences of first responders who have experienced traumatic emergency calls?
- What does it mean to be resilient as a first responder?
- What resources, trainings, and strategies are most effective in countering behavioral health needs in the fire service?

The lived experiences of first responders vary from pediatric fatalities to known suicide in the fire station to entire families being tragically killed. Each participant shared a deep, detailed experience that affected them emotionally or even apathetically which often left them unsure how to feel, think or process the traumatic event. How does a firefighter (regardless of rank) make sense of traumatic events they experience while on duty?

Pietkiewicz et al. (2012) stated,

The narrative account is followed by a discussion section which relates the identified themes to existing literature. Reflection on the research can be included here, as well as comments on implications of the study, its limitations, and ideas for future development. (p. 364)

I have added an IPA narrative section to give insight into the lived experiences of firefighters, scripted in their own words as well as utilize what Pietkiewicz et al. (2012) recommended for further insight from researcher to reader.

The IPA narrative section was an excerpt from the interview that was word for word from the interviews which added value to the research and connected verbatim phrase usage to thematic findings. The three narrative sections all distinctly support openness, vulnerability,

courage, honesty, and candor of the participants that will increase the relatability for the readers such as firefighters, driver operators, company officers, chief officers, and leadership. The true impact of my research connects past participants to eventual readers through empathy and a realness that only first responders fully understand. This analysis was equally important as the emerged themes but deserved a highlighted account of truth, transparency, and trust. See discussion section below from the narrative account of related themes from the research.

### **IPA Narrative Section I**

Trying to rationalize the traumatic event, the participants identified the “normalization” of the traumatic event as well as the reality of the job as a first responder through their lived experiences and their resilience. Below is a compilation of responses from participants:

The circumstances leading to the traumatic event may be more troublesome than the event itself. A death is a death and it’s just part of the job but it still can weigh on you. *Pediatric calls*, visually traumatic calls with entire families, and when you lose one of your own really can be hard to handle. Talking about it helps, if you have someone you trust. *Prayer* helps too but I question God sometimes why such bad things constantly happen. I sometime see faces, eyes, skin color, and it reminds me of the people on the call, and the smells especially. Even the food I was eating when the call dropped; I remember the food. But sometimes, I’m not bothered at all. I just do my job and recognize that it isn’t my pain, it was just a call I responded to. I’ve grown “numb” to a lot of these calls and I have to remember that it isn’t my loss, although staying on scene for long periods of time doesn’t help either. I am more likely to bounce back if my *peers validate* how I feel or how I don’t feel, if my Chiefs are *approachable*, and if I can talk to someone, I trust who *understands* what I am going through.

The account above gave a snapshot into how firefighters of all ranks rationalize the traumatic event, the lived experiences in which they endure when they go to work and do their job. This represented how firefighters vary in approach to traumatic events, even more prevalent to recognize the subjectivity in traumatic event response from person to person based on individual resilience. From this account, I would challenge all firefighters to recognize the normalization of symptomatic responses as they normalize the traumatic call or event, therefore identifying potential peers who may need next-level behavioral health care.

Occupational resilience can increase through education, clearly communicated processes and initiatives which create a culture of courage to share, seek opportunities to help our own and solidify systems for our firefighters. Post-incident formal resources should be familiar with firefighter station life, emergency call types and the emergency responder lifestyle so that empathy, validation and trust serve as springboards of coping mechanisms and suicide ideation identification.

## **IPA Narrative Section II**

By compartmentalizing key responses of firefighters in relation to the perception of linguistic uses, firefighters use specific terminology that elicits closer attention for fire service leaders to respond accordingly. Below is a compilation of responses from participants:

Due to displays of emotion and the perception of *weakness* in performance, a firefighter is less likely to share if there is an emotional struggle and even less likely to share with an officer due the “weakness/performance” relationship. I (firefighter) would be willing to share with a *peer* firefighter who I *trust* since they aren’t my boss. I just work more and more, even if I am struggling with something emotionally as I want to *stay busy*. If I don’t stay busy, I would rather be alone (*seclusion*), workout (males),

do something which doesn't require thought (females), or just have some *separation* from work with my *peers*. The Chiefs seem a bit more *callous* but if I know they care about us, and are *approachable*, *validate* what I think or feel, *listen* and I know I won't be in *trouble*, I would *share* my thoughts.

Firefighters are more likely to utilize peer interventions as a primary means for the potential need of next-level care; therefore, fire service leaders should focus on preparing firefighters and company officers to be attentive, responsive and supportive to one another in the daily contexts in which firefighters are accustomed (Jahnke et al., 2014). Due to a number of occupational stresses associated with firefighting where occupational resilience plays a key role, prevention and treatment need to be tailored for firefighters in response to stress and recognized PTSS, considering the egocentric culture steeped in deep tradition (Pao & Tran, 2017). Boffa et al. (2017) discovered the relationship of PTSS and suicide ideation correlated directly to the degree of symptomatic responses and shared, "recalling and reprocessing an index trauma, there are concerns that the stress of this component may increase suicidality" (p. 281). Words are important and the linguistic themes give increased clarity for fire service leadership initiatives to increase recognition, responsive actions, and a rhythmic cadence for holistic health of firefighters.

### **IPA Narrative Section III**

Maturing perspectives from Officers and Chief Officers provide essential road mapping toward behavioral health needs and recognition of further initiatives for firefighter behavioral health as seen in the response below from the analysis with emerging themes identified. Below is a compilation of responses from participants:

*Outside support and pre-incident relationship opportunities* can really help fire departments when tough times hit home. Take the time to know our people, watch for *mood changes, seclusion*, and recognize when your people aren't acting like themselves. What the fire service needs is *mentoring and education* to change the stigma of *weakness* as well as lessening the connection of fire ground *performance* to behavioral health. Behavioral health should not be seen any different than medical health or injury. As Officers, we must focus on *relationships*, teachable moments, and *accessibility* for our people. We as Officers also need outlets from our Chiefs so we can get help to help our people.

Onyedire et al. (2017) reiterated that psychological resilience is a unique quality that determines an individual's capability to deal with adversity and resilient or hardy workers are team oriented, effective communicators, adaptable to change, hold positive and flexible attitudes, engage in continuous learning, are self-confident, willing to take risks and are committed to personal excellence.

Of the many roles of a Company Officer and Chief Officer, knowing your people, effectively communicating, being decisive, being competent and influential in the lives of your people provide a culture of openness and empowerment which is necessary for sharing personal experiences, even with occupational resiliency. Onyedire et al. (2017) shared that caring relationships are the building blocks of resilience in the workplace and fire service cultural change needs an open communication system and supportive work environment for awareness creation programs that empower a culture of courage in the fire service.

**Needed change, age-old practices.** Firefighting is a stressful job and treatments are needed to be tailored for firefighters to meet their behavioral health care needs (Pao & Tran,

2017). Experience, time, and stress coping mechanisms aid in resilience growth for bouncing back after a traumatic event, which in turn, means living, working, playing, and loving others in an attempt to live the best life possible (Glenn, 2017). Chief Officers can lead initiatives by providing trusting platforms for firefighters to share thoughts and/or feelings when known call types could elicit a symptomatic response from firefighters who are in need of an approachable, empathetic and experienced officer. Shift commanders (Battalion Chiefs/District Chiefs) are the key component for firefighters, driver operators, and company officers to share concerns from a traumatic event as they are the primary leader who cares for his/her people. Per the research, when the shift commander validates the realities of the emergency call, shares a testimony similar to the call type and allows the stigma of sharing to be perceived as a strength, not a weakness, the first responder group is more likely to share in that setting. Officers should be on a heightened sense of awareness, especially after pediatric emergency calls, recognizing that burnout and anxiety sensitivity can result from a single or repeated traumatic experience.

**Stark realities.** The study identified pediatric deaths, line-of-duty deaths, and whole families tragically killed as incident types that could elicit a behavioral health response with pediatric emergency calls as the most problematic for an emotional or apathetic response. Jo et al. (2017) revealed how PTSD associations and burnout can have negative effects on job performance and interpersonal relationships, resulting in depression, alcohol abuse, low quality of life, and physical health problems. In a study done by Stanley et al. (2017), anxiety sensitivity and PTSD are reciprocally linked, that is, following exposure to a traumatic event, individuals may learn to fear anxiety-related symptoms that are associated with the trauma. Anxiety sensitivity concerns are also a consequence of PTSD and cognitive concerns, specifically, may be the most robust predictor of suicidality. Lower resilience is seen in firefighters who lack rest,

poor hydration and nutrition, work too much, have relationship or financial stress and have overall poor health (Glenn, 2017). Male firefighters prefer to exercise as a coping mechanism which can signify a “safe place” to potentially share thoughts or feelings but often fall into a pattern of working more shifts to stay busy, which is not a safe coping mechanism. Occupational resilience grows over time through experiences and training for firefighters so they can perform essential job functions under stress and learn to cope appropriately for overall behavioral health (Glenn, 2017). Female firefighters preferred relaxation, even seclusion, after a traumatic event as females are less likely to report any thoughts or feelings since fire service cultural undertones already challenge how females are perceived, especially with performance and being viewed as “weak.” Additional research on gender disparities and fire service presuppositions is necessary for future clarity within the fire service.

**Connecting.** Per my research, fire department support mediums consist of Critical Incident Stress Management teams, Chaplain Agencies, Professional Counselors, Employee Assistance Program support, Faith-Based Leaders, and Peer Support Teams. The sample group described attributes that individuals should possess for honest sharing to occur before and after a traumatic event. Trust, active listening, empathy, approachability, faith-based support, validation and openness are relational and communicative values that increase the chances of sharing thoughts and/or feelings from a traumatic event, even as resilience levels rise both personally and occupationally, per the sample group. Jo et al. (2017) shared, “The effect of a sense of calling on the relationship between burnout and PTSD symptoms was supported; however, a sense of calling aggravated the relationship between exhaustion and PTSD symptoms.

Although a calling to a field of work is generally perceived as a positive variable, it can be harmful to people who are exhausted” (p. 122). My study shared that firefighters, especially

those struggling, will work more hours, pick up shifts, and stay busy after a traumatic event as a coping mechanism. Once exhaustion sets in, mood swings are recognized by family and peers, and a firefighter is secluded at home or in the station, the risk of suicide ideation dramatically increases after a traumatic event. By defining how firefighters view “weakness” in the service, the results could impact information sharing as approach to the concern is equally important to the approachability of the Company Officer to firefighter relationship.

#### **Chapter 4 Summary**

IPA provided rich, descriptive details through the lens of first responders who experienced traumatic events such as pediatric deaths, line-of-duty deaths and entire families killed. Narrative accounts from the participants were supported by discussion sections with specific examples from the sample group as thematic insights connected the role of individual resilience, formal and informal resources of behavioral health support and the impact of traumatic events for firefighters.

Firefighters shared their lived experiences, how they bounced back from a traumatic event while coping with their symptoms and what resources were most effective while coping before and after a traumatic event, which allowed IPA to identify descriptive, conceptual, and linguistic themes, which funnel toward fire service cultural change for better firefighter behavioral health. Research identified key relational and communicative traits for each rank that, when enacted, will provide a safe setting for firefighters to share with peers, peer support teams, counselors, and CISM teams to normalize and validate the symptomatic response as much as the normalization of the emergency call. Fire service cultural change necessitates action by leadership to create, educate, implement and evaluate behavioral health mediums to mitigate the impact of traumatic events for our firefighters of all ranks, tenures, and genders. Chapter 5 will

capture the summary of results, the relationship of the results to literature, implications of the results and recommendations for future research by scholars and fire service leadership.

## **Chapter 5: Discussion and Conclusion**

The purpose of this chapter was to capture the summary of results, synthesize results to the other chapters, discuss implications of results for the fire service, and make recommendations for future research by scholars and fire service leadership in order to increase awareness of firefighter behavioral health. By identifying mediums to mitigate the impact of traumatic events for firefighters to reduce and hopefully eliminate suicide ideation through courageous cultural change, new traditions will emerge for firefighters to embrace a “share because we care” mentality where strength is measured by holistic wellness instead of physical stature and degree of ego.

### **Summary of the Results**

The purpose of this study was to recognize how individual resilience related to lived experiences for firefighters who may need next-level behavioral health care, which in turn, will identify higher “at risk” firefighters with suicide ideation who need increased mental and emotional care outside of peer interventions. The fundamental question centered on what role did individual resilience, as well as formal and informal resources of behavioral health support, play in mitigating the impact of traumatic events? Firefighters experience a variety of challenging situations and traumatic events while performing necessary job duties as public servants such as fires, medical emergencies, motor vehicle accidents, hazardous material emergencies, natural disasters and graphic emergency calls that can create elevated stressors and symptomatic responses, leading to behavioral health concerns (Gulliver, 2018). There is an increased focus by fire service leaders for firefighter behavioral health due to signs and symptoms related to post-traumatic stress syndrome and the growing trend of known suicide attempts and unfortunately, suicide successes, which is the crux of the issue (Mayo Clinic, 2015).

Direct observation interviews provided a platform for intimate discovery of life experiences such as traumatic events, coping mechanisms, and organizational support initiatives. I wanted to capture the essence of lived experiences of firefighters, driver operators, company officers and chief officers to gain insight into how their individual resilience, coupled with formal and informal mediums, helped identify behavioral health needs to cope with traumatic events as a first responder. The research sought guidance to identify a three-career phase plan for firefighters such as a prevention edification tract for new firefighters, post-traumatic call conversation tract after an occurrence and how firefighters entering retirement could unpack a career of potential traumatic experiences which fell under fire service cultural stigmas of weakness, ego and traditionalism. Interpretive phenomenological analysis identified how firefighters made meaning of resilience as it related to lived experiences associated as a firefighter. I wanted to discover how firefighters battled back to the job through personal and/or organizational mitigating mediums, coping mechanisms, and support as firefighters of different tenures, ranks and genders processed traumatic events.

Furthermore, findings indicated necessary cultural change for the fire service to focus on relationships, behavioral health responsibilities to self and others and renovation of current practices for firefighters. A summary of results begins with preventative edifying initiatives for new firefighters that will educate members on the realities of the job, possible symptomatic responses associated with traumatic events, appropriate coping mechanisms, peer support initiatives and processes that each fire department will incorporate into their standard operating guidelines (SOG) for all employees. Each fire department will require a plan for their members which fits their resources and needs for firefighter behavioral health initiatives.

## **Discussion of the Results**

This study looked at how individual resilience related to lived experiences for firefighters who may need next-level behavioral health care, which in turn, would identify higher “at risk” firefighters with suicide ideation who need increased mental and emotional care outside of peer interventions. Although the primary findings did not definitively identify a specific group of firefighters who may need next-level care outside of peer interventions, the study did provide clarity on the importance of behavioral health preventative education for firefighters, the need for fire service leadership to embrace cultural change for behavioral health initiatives utilizing peer assistance teams, how to host post-incident conversations accordingly, and how different ranks within the fire service utilize individual resilience and coping mechanisms to mitigate the impact of a traumatic event. From these findings, the research provides a template for fire service leadership to incorporate individual resilience, formal and informal resources of behavioral health support and practical methodology to encourage a courageous “share because we care” concept, from the potential impact of traumatic events as a firefighter from all ranks, genders, tenures and age groups.

**Erase the stigma.** A fire service traditional stigma connects job performance to remedial training to punitive measures should an employee struggle with the expectations of their position. Identifying performance expectations aside from human behavioral health initiatives could be the difference of firefighters seeking help or sharing in a safe setting. If in any way a firefighter views seeking help or sharing as potentially punitive or identifies their performance as “weak,” where they could be removed from duty, they are unlikely to share feedback. Firefighters identified “weakness,” when asking for assistance, which lessens the chances of asking for help as weakness relates to fire ground performance from their perspective. Each fire department

must have a plan in place for their firefighters to edify, encourage and engage in courageous conversations to take place in familiar settings with trusted, validating and empathetic people after a traumatic event as well as a follow-up period 7–10 days later. The stark reality of traumatic event normalization for firefighters is that many don't recognize the symptomatic responses as normal, therefore coping mechanisms can increase the likelihood of increased behavioral health support for our firefighters. By fire service leadership providing a clear plan, communicated processes, peer support teams and approachable officers, these efforts should elicit first responders to share and/or seek additional behavioral health support after a traumatic event. Relational norms such as trust, openness, honesty and changing the perception of weakness will ignite a mentoring relationship for firefighters. New initiatives will provide formal and informal settings for first responders of all ranks, genders, ages, and tenures to process as a human so serving as a first responder isn't defined by a single call type but defined by the "call" to serve and make a difference in the lives of others.

The International Association of Fire Chiefs (2017) issued a report that stated,

There is a fear of being ostracized by telling our brothers and sisters that we are having a hard time dealing with a call; there is also a fear that if the command staff finds out that we are struggling, that we will be viewed as unfit for service. (p. 13)

Based on fire service cultural traditions, environmental and personal factors play an integral role in how resilience for firefighters relate to mental and emotional intervention needs in response to traumatic events. Firefighters are less likely to report any significant symptomatic responses to traumatic events as they are relying on their peers to recognize mood swings, seclusion and performance shifts while on duty. Through new training initiatives, fire departments can educate

their people to look for signs and symptoms in others and provide clear paths of communication up the chain of command.

Onyedire et al. (2017) reiterated that psychological resilience is a unique quality that determines an individual's capability to deal with adversity and resilient or hardy workers are team oriented, effective communicators, adaptable to change, hold positive and flexible attitudes, engage in continuous learning, are self-confident, are willing to take risks, and are committed to personal excellence. Fire Service leadership must embrace behavioral health cultural change with a united resilient front for how to communicate weakness, courage and performance, all the while engaging in educative initiatives for our Chief Officers to mentor our Company Officers, Company Officers mentoring our Driver Operator/Firefighters, and our firefighters receive a clear message that all officers should be approachable. Cultural change is as subjective as resiliency and the impact of traumatic calls, but leaders recognize that its existence is prevalent to capitalize on occupational resilience to move forward with necessary initiatives.

For recovery efforts when resilience is lacking, firefighters need empowering approaches toward new behavioral challenges with a positive perspective on pain, tragedy and trauma, going forward in life instead of a negative trajectory toward suicide ideation (Henderson, 2012). Educated peers can help identify behavioral patterns in peers, therefore lessening the judgment and performance relationship within the crew dynamic where mentoring is key to create an empowering environment so the stigma of weakness is replaced with strength through cultural change.

### **Discussion of the Results in Relation to the Literature**

The following sections filled gaps and reiterated key findings in previous research. The literature review examined current literature through the lenses of the conceptual framework.

Dudovski (2017) explained that according to interpretivist approach, it is important for the researcher as a social actor to appreciate differences between people as interpretivism studies usually focus on meaning and may employ multiple methods in order to reflect different aspects of the issue. This study provided insight into human behavior, such as coping mechanisms, traumatic event processing, and support systems which aid firefighters in mitigating the impact of the event itself. The literature review highlighted key themes for leadership to create, implement, and evaluate necessary cultural change for new fire service behavioral health initiatives for our firefighters.

**Relationships shape realities.** In a study done by Stanley et al. (2017), anxiety sensitivity and PTSD are reciprocally linked, that is, following exposure to a traumatic event, individuals may learn to fear anxiety-related symptoms that are associated with the trauma. Anxiety sensitivity concerns are also a consequence of PTSD and cognitive concerns, specifically, may be the most robust predictor of suicidality. My research identified that pediatric emergency calls elicit an emotional or apathetic response (anxiety sensitivity connection) and firefighters need validation either way to increase the likelihood of sharing thoughts and/or feelings. Separation from the normalization of emergency call type and how a firefighter copes with thoughts/feelings requires peer validation, separation from the job itself, and time to adjust to the “newness” of being a firefighter. The more frequent the traumatic event (in relation to rank and tenure) resulted in higher internal locus of control for individuals who recognized the normalization of the call as well as the normalization of a symptomatic response, hence increased resilience for these individuals and the ability to better recognize behavioral concerns.

Chief and Company Officers must provide mentoring with their subordinates to increase the external locus of control which can improve an internal locus of control for firefighters to

better recognize symptoms, seek out trusted assistance and increase personal behavioral awareness. An identified gap in current research is the minimal responsive measure to improving internal or external locus of control for firefighters. Boffa et al. (2017) identified the important role of connectivity from one's peer community as well as professional help to the reduction of suicide ideation and attempts based on the severity of the traumatic event. An increase in mentoring awareness will focus on communal responsiveness, post-traumatic mediums, and will prepare peers to identify peer firefighters who may need next-level care based on symptomatic response.

Jo et al. (2017), in a study of 109 firefighters in South Korea, used self-reporting questionnaires (quantitative) to identify if PTSD and burnout shared common symptoms but different causes. They found that PTSD focused on the traumatic event or repeated traumatic events whereas burnout job characteristics, such as workload, work structure, job support, role conflict and role ambiguity were associated with burnout characteristics. The significance of this study focused on the relationship between symptomatic responses with different causes but failed to capture how resilience contributed to a sense of calling through different stages of a fire service career. Degrees of resilience varied from rank to rank and tenure levels in relation to a traumatic event, especially with repeated traumatic calls such as pediatric deaths. One concern from the results focused on the role of Company Officer in relation to burnout. Chief Officers identified the value in slowing down, understanding the process, communicating the process from the actual traumatic event to understandable symptomatic responses and normalizing the event itself as part of the job, in fact the worst part of the job (validation to subordinates). If Company Officers felt unsupported by their Chief Officers or the COs were unapproachable, the officers focused on their firefighters by creating safe settings in the fire station for openness,

trust, validation and empathy for crew relational integration. This pressure can build for Company Officers so Chiefs must recognize the needs of their subordinates as the company officers are serving their driver operators and firefighters needs. Chief Officers must take the time and initiative to care for their Company Officers.

Stanley et al. (2017) performed quantitative research to identify the relationship between anxiety sensitivity and PTSD following exposure to a traumatic event, specifically for women firefighters. Results demonstrated how individuals may learn to fear anxiety-related symptoms that are associated with traumatic calls. As I stated in Chapter 2, the link from this study to my conceptual framework could necessitate a survey to identify patterns of high traumatic calls (such as pediatric emergency calls) based on occupational resilience to identify potential anxiety sensitivity triggers as well as reoccurring exposures for first responders. This data could prompt additional need for fire service leaders to reach out to individuals with increased exposure based on volume and occurrence. Boffa et al. (2017) pursued research through a nationwide study of 893 firefighters to discover if the relationship of PTSS and suicide ideation correlated directly to the degree of symptomatic responses and shared, “recalling and reprocessing an index trauma, there are concerns that the stress of this component may increase suicidality” (p. 281). In order to identify potential suicidality, educative platforms with pertinent content as well as post-incident conversations led by the shift commander could better identify formal and informal mitigating mediums for first responders to cope with recalling a traumatic experience.

**Recruit the team.** Correctly identified leadership attributes promote a healthy working environment. These attributes, coupled with a collaborative cultural shift, reliance on communication, organizational stakeholder buy-in, sharing of information, motivating the team and a crew of visionary people that work as game-changers who holistically desire firefighters to

lead healthy lives mentally, physically and emotionally, are a basis for success (Rosen, 2013). Each fire department should assemble their visionary people to form the peer support team and fill the various identified roles in the peer support team standard operating guideline. These individuals should be passionate, easy-going, trustworthy and be highly recommended by a peer and supervisor, recognizing the importance of confidentiality as well as when to report should someone want to hurt themselves or others (Glenn, 2017). For recovery efforts when resilience is lacking, firefighters need empowering approaches toward new behavioral challenges with a positive perspective on pain, tragedy and trauma, going forward in life instead of a negative trajectory toward suicide ideation (Henderson, 2012).

My study identified needed education when new firefighters are hired and focuses on the process of human to first responder back to human once the call subsides. The subjective reality of traumatic events is discussed as well as the normalization of the calls in relation to the normalization of potential symptomatic responses, the processes that are established for their behavioral health, a courageous conversation on how weakness is perceived and how to “share because we care” as a cultural change within the fire service. As a fire service leader, the stigma of weakness in relation to performance as well as punitive measures in relation to performance is clarified through separate performance-based evaluations for job performance and training initiatives. My research has already re-shaped how to approach behavioral health needs for Fire Service personnel and how to communicate the separation of performance and asking for help. See Appendix H for details on behavioral health initiatives.

Since the majority of literature and previous research was conducted by academics outside the fire service, my research gained insight through the lived experiences of firefighters and my own personal background in the fire service, to recognize that post-incident

conversations are best led by the shift commander or a peer co-op response team where these people are familiar with fire station life, emergency call types, experiences and the lifestyle of a firefighter so individuals willing to share will be validated, trusting and empathized throughout the conversation. This identified comfort level for firefighters and company officers served as a springboard for symptom recognition and transparent, trusting settings for firefighters to engage away from punitive presuppositions for appearing “weak.” Informal peer interventions (one-on-one) are the primary means utilized by firefighters, therefore training regimens should focus on peer training to recognize patterns of behavior or symptoms that family or work peers would key in on. My research found that the company officer and driver operators are more likely to share when the shift commander (battalion chief) is accessible, approachable, and takes time for them through mentoring initiatives. Chief officers are more likely to share challenge areas when the administrative chiefs take time for them, support their needs, and recognize that they are the influential people for the crews and must be supported with clear processes, procedures and financial commitments toward behavioral health.

Specific linguistic responses capture opportunities for peers and leadership to recognize, respond accordingly and provide a rhythmic cadence for firefighter behavioral health. Through the power of word usage from the participants, patterns existed between the different ranks which would prompt a conversation for leadership. Company and Chief Officers must know their people, effectively communicate, be decisive, competent and influential to provide a culture of openness and empowerment which is necessary for sharing personal experiences even as occupational resilience increases over time with experience and training. These relationally intentional initiatives send a message of a caring community where a holistic approach to firefighter health is embraced for a long career and an even longer retirement.

**Embrace necessary change.** Age-old practices, egocentric attitudes, lack of research and poor leadership has contributed to an environment where firefighters are left with uncertainties associated with PTSS. Fire service leadership has an opportunity to embrace cultural change by enacting empathetic understanding through the eyes of firefighters suffering from PTSS, providing preventative edification identifiers for firefighters who may present PTSS, teaching peer intervention techniques and creating post-incident responses based on occupational resilience levels, which are identified through relationship of symptom to resilience measurements (Rothmeier, 2017). My research findings were generated through the eyes of firefighters, analyzed utilizing interpretive phenomenological analysis, coded by descriptive, linguistic, and conceptual themes, and through the data analysis process, themes emerged that can shape how to edify, encourage and engage firefighters to share and better recognize how our brother and sister firefighters cope with traumatic events.

### **Discussion of the Conceptual Framework**

The goal of interpretivist research is to understand and interpret the meanings in human behavior rather than to generalize and predict causes and effects (Neuman, 2000). Dudovskiy (2017) explained that according to interpretivist approach, it is important for the researcher as a social actor to appreciate differences between people as interpretivism studies usually focus on meaning and may employ multiple methods in order to reflect different aspects of the issue. As the researcher, I appreciated differences between different ranks and genders as each participant allowed me to view traumatic events through their personal lens. This study, through an interpretivist conceptual framework, provided insight into human behavior, such as coping mechanisms, traumatic event processing, and support systems which aid firefighters in mitigating the impact of the event itself. Having utilized a social constructivist framework, the

complexity of views discovered rich description that was substantiated behind linguistic expression from firefighters to battalion chiefs as a primary contribution toward cluster groups which impacted research findings for future implications.

### **Limitations**

Limitations for this study were time constraints (longitudinal effects), lack of prior research, and the sample size. The sample group was comprised of firefighters, driver-operators, company officers and chief officers, all varying in gender (two females, seven male), tenure (5–24 years), rank and education levels. My goal was to interview 12 participants (recommended per IPA methodology) but finished with nine participants. Due to the subject matter, there may have been some trepidation for involvement, which supports an underlying cultural stigma within the fire service in relation to behavioral health. I believe using IPA methodology was a perfect fit for what I was attempting to discover, even though I only had nine participants as each interview was lengthy in time due to rich, descriptive responses from the participants. I wanted more female participants but the fire service, in general, is dominated by men, which points to additional recognition for future research for females in the fire service. One area that would have strengthened the study was the diversity of the sample size. My intent was to focus on the 5–24-year firefighters at different ranks to gain insight for the newer firefighters and those entering retirement close to the 25-year mark. I feel that the analysis provided clarity for the 1–4-year firefighter but I did not gain true insight into how to help prepare future retired or current retired firefighters with their behavioral health, which tends to be the highest suicide attempt group.

I also would have liked to have had an Assistant Chief or Fire Chief to share insight from their perspective as top management and leadership of the fire department. The upper chiefs are

responsible for budget justification, providing policy and procedure for operations and justifying to elected officials the needs of the fire department, which include behavioral health initiatives. I would have enjoyed their perspective and what primary concerns they may have had, as I was promoted to Assistant Chief during this dissertation process. It would have helped my personal perspective as well since I am not as “in touch” with the troops from day to day like the shift commanders (battalion chiefs) are. If this study were to be replicated, I would suggest a longitudinal study with the same sample participants who participated in peer support team efforts to track how their coping mechanisms change, if at all, how individual and occupational resilience influence their ability to bounce back after traumatic events, and what do they think it takes to live a healthy behavioral life as a first responder as the normalization of the calls continue. An additional element would be a longitudinal study of the newest firefighters who are hired as they benefit from fire service cultural change with processes and procedures to better ensure their behavioral health needs are being attended as they receive peer support from the peer co-op response team.

### **Implications of the Results for Practice, Policy, and Theory**

Implications of my research and findings have a direct impact on practice, policy, and theory by recognizing cultural change within the fire service for behavioral health initiatives for firefighters to feel safe, and giving them opportunities to openly share after identified critical calls. My data complemented my conceptual framework as it appreciates differences between firefighter ranks, specifically, the meaning behind certain words and the symptomatic responses of firefighters as well as coping mechanisms, after a traumatic event, in addition to employing multiple methods to reflect different aspects of firefighter behavioral health needs. My work identified how a strong external locus of control (community) improved the likelihood of

firefighters strengthening their internal locus of control (sharing) after a traumatic experience through after-action reviews led by the shift commander (battalion chief). My research identified the importance of each role between firefighter and battalion chief and how through resilience and occupational resilience, coupled with processes before and after a traumatic incident, safe settings provide informal and formal mediums to mitigate the impact of traumatic events

Specific needs such as empathy, validation, perception of weakness, approachability, and vulnerability set the tone for firefighters to be open to share or even identify a symptomatic response by simply performing an after-action review of the traumatic call, therefore processing the facts as an empathetic leader levels the playing field for company officer, driver operators, and firefighters to speak freely. Fire service leadership should identify relational skill sets in promotional exams or assessments, recognizing “relational aptitude” as a primary trait for chief officers. If our firefighters and driver operators are identifying peer empathy, relationships, approachability and validation as primary behavioral health needs, then our company and chief officers must be attuned to their needs.

As fire service leadership initiates intentional personnel management and personal growth mentoring, officers may be more equipped to recognize anger and seclusion in subordinates who choose to be alone for longer periods of time after an identified critical call, such as pediatric traumatic event. Peer support teams clearly are a necessity outside of one-on-one peer intervention in informal settings to better support crews who respond to traumatic events. My recommendation for a peer co-op response team to be available after a critical incident, which allows for validation and empathy without fear of punitive measures or the perception of weakness in relation to performance on the fire ground. A clearly communicated SOG and plan encompassing preventative edification mediums, post-incident processes and

resources for employees can compartmentalize proactive behavioral health care initiatives with clear separation from performance-based measuring mediums that could result in punitive measures from their perspective.

Further implications of practice center on the fundamental question on the role of individual resilience, as well as formal and informal resources of behavioral health support and how they play a role in mitigating traumatic events by identifying how occupational resilience grows with time, training, and experience. Although we cannot speed up time and thereby develop experience more quickly, administrators can train chiefs to lead conversations after specific call types, provide appropriate policy and procedures, and create a peer support team to help firefighters recognize symptomatic responses to traumatic calls and/or better identify those who could need next-level care from a clinician. A significant finding for scholars, academics, and the fire service is the idea that firefighters can normalize the traumatic event or call but struggle normalizing the possible symptomatic response that could turn into a behavioral pattern leading toward suicide ideation.

For the fire service to culturally embrace this concept means that through edification, empowerment, empathy and engagement, a solution to the handcuffing traditionalism where ego drives the lack of sharing shifts to a culture of courage with a “share because we care” mentality. This in itself is a positive implication that can and will save lives of first responders by providing resources, strategies and trainings through effective communicative mediums. Fire departments should enact an AAR by their shift commanders (chiefs) immediately after a traumatic event. Upper management should prepare for additional resources, based on the recommendation of the shift commander, to respond accordingly to the “tiered” needs of the firefighters. Outside of peer intervention, an AAR by the shift commander should start the process, followed by a PCORT,

elevated to a faith-based leader and/or clinician, and finally, a private treatment center for our firefighters so they can receive constant care until their quality of life returns to the fullest both at work and home. For a line-of-duty death, a prolonged natural disaster, or a mass incident, local critical incident stress management teams should be notified for additional support.

My research implications can be utilized across the fire service as a template of recognition, regeneration, and replication of cultural fire service stigmas, which now shift toward true courage to help our brother and sister firefighters in need. Policy implications will be prevalent from this study as the fire service as a whole can benefit by having clear processes and procedures before and after a traumatic incident which will guide creation of peer support teams, standard response protocol to high acuity call types, a strengthening of mutual aid relationships from fire department to fire department in the form of PCORT and the formal education for chief officers to mentor company officers for symptomatic recognition in their firefighters. The implications for theory are united through the lens of firefighters throughout the fire service that this growing epidemic has been pushed aside for generations of firefighters and must be identified, codified and solidified. Fundamentally, the idea or theory that helpers do not ask for help has been engrained in the fire service from inception. My message is for helpers, first responders and firefighters to create new traditions to share concerns so that leaders create a culture of courage to have a “share because we care.” Since resilience is contextually bound and subjective, the one unifying commonality is the normalization of the traumatic event, even if the symptomatic response varies from person to person. The idea that a first responder could be negatively impacted from a traumatic event or through recall or re-experience or have a different symptomatic response must be validated and normalized through empathy, trust, and safe settings for first responders to share.

The underlying theory, policy, and practice are united by the presence of community where an uncommon esprit de corps exists within the fire service to truly be our brothers' and sisters' keepers. My research not only identifies solutions to age-old stigmas but capitalizes on courageous culture led by uncommon leadership to better identify those who could consider suicide as an option through edification, empowerment, empathy and engagement by using peer support teams and clinicians to normalize the symptoms as much as one can normalize the emergency call.

### **Recommendations for Further Research**

My recommendations for further research would specifically focus on the differences in male and female firefighters in relation to burnout verses suicide ideation based on traumatic events. My research identified that male and female firefighters utilize very different coping mechanisms after traumatic events. Female firefighters already are fighting an uphill battle to not be perceived as weak, so based on the perception of weakness and performance on the fire ground, how would this impact the number of female firefighters who would be less likely to ask for behavioral health mediums? Further research could utilize a longitudinal study following newly hired firefighters throughout their career who benefit from new behavioral health policies and procedures to identify trending in firefighter suicide ideation and attempts. Another study could focus on retired firefighters and how they process traumatic calls after their active duty comes to an end. What needs may they have to live a quality life? How does recall affect their behavioral health? What trigger(s) may have led them to contemplate suicide as a retired firefighter?

How does internal and external locus of control impact their ability to cope with recall as a retired firefighter? How does a faith-based lifestyle impact a firefighter's ability to cope with

traumatic events? In my research, some of the responses led toward the importance of a faith-based community for support, pastoral care and the value of prayer. A study of first responder families and how they cope as people who experience their loved one with PTSS or PTSD would strengthen the research literature. What needs do families have? How do they need to feel supported? Finally, a study on firefighters, active and retired, who would courageously share their stories as they contemplated or attempted suicide. What drove them to the point of attempt? What stopped them from the attempt? Each of these future studies would help firefighter behavioral health initiatives and support my passion of helping the helpers as each other's brother's and sister's keeper.

## **Conclusion**

The purpose of this study was to recognize how individual resilience relates to lived experiences for firefighters who may need next-level behavioral health care, which in turn, will identify higher at-risk firefighters with suicide ideation who need increased behavioral health care outside of peer interventions. The fundamental question centered on *what* role did individual resilience, as well as formal and informal resources of behavioral health support, play in mitigating the impact of traumatic events? This study utilized interpretive phenomenological analysis to identify how firefighters made meaning of resilience as it related to lived experiences associated as a firefighter, looking through their lens from rich, descriptive insight into their traumatic events. Direct observation interviews, analysis of the recorded data, descriptive, linguistic and conceptual coding associations, and data-driven results from the research provided a perspective from firefighters at different ranks, tenures, ages and genders. It also gave insight into how the fire service must change and what fire service leaders must enact as change leaders with a known epidemic of suicide ideation and attempts.

Primary findings center on the need for peer support teams with my recommendation of a peer co-op response team from neighboring fire departments operating under a relational memorandum of understanding to increase openness through validation, empathy, trust and lack of judgment with the fear of weakness being perceived from behavioral health to performance on the fire ground. Pre-incident edification programming will prepare our new firefighters with the recognition of normalization of specific call types that could elicit a symptomatic response, validating that normalization of the symptom is equal to the normalization of the call. Shift Commanders (battalion chiefs) will lead post-incident conversations by performing an after-action review based on the call, strategic and tactical decision making, SOG, protocols, outcomes and lessons learned. The AAR is the “hook” for the leader of the group (shift commander) to validate the call, speak about potential observations or thoughts and share testimony from experience to level the playing field for his/her troops in the room in order to foster an open, honest environment which promotes courageous conversations. Formal and informal settings serve as functional areas for conversations as firefighters respond better to informal settings if they feel safe to share. “Share Because We Care” is advocated in both informal and formal settings with peers, supervisors and family support. Peer co-op response teams from neighboring fire departments will provide next-level support after the shift commander and should specific behavioral health needs arise, faith-based leaders and/or clinicians are contacted for support, preferably ones who have developed a rapport with the firefighters prior to the incident occurrence. Pre-incident edification programming and post-incident responsive measures were identified from the research to provide mitigating mediums for formal and informal support for firefighters at different ranks, tenures, ages and genders. One of the reasons for this study was to provide a template for the fire service where based on resources, each fire department could

customize their needs to their resources and provide meaningful, intentional behavioral health support for their people.

As time, training and experience increases, occupational resilience aids in processing traumatic events and firefighters become more callous as the normalization of the call type occurs. Primary means of coping center on mood swings, seclusion and shifts in behavior while at work or home. Edification initiatives for current firefighters, driver operators, and company officers will equip crew members to better recognize signs and symptoms of PTSD, PTSS, and suicide ideation, while identifying high acuity traumatic events which research has shown can affect a firefighter, particularly the “loner” type. Relationships, mentoring and a heightened sense of awareness are key to recognizing symptomatic responses from a traumatic event as the fire service must destroy the stigma of how weakness is perceived and replace that stigma with strength through courageous cultural change for behavioral health. Firefighter behavioral health should not be seen as any different than medical health or injury as fire service leadership embraces a holistic health approach for our firefighters to live a long life and an even longer retirement.

My research set out to discover the roles individual resilience as well as formal and informal resources of behavioral health support play in mitigating the impact of traumatic events. I was driven by passion, personal loss, frustration, sadness as well as objective scholarly cognition that process and patience will pay off so the fire service could address this epidemic. I feel that my study identified how individual and occupational resilience work as a partnership, just as formal and informal resources of peer support and educative mediums will mitigate the impact of traumatic events as symptoms are normalized just as the call is normalized through the lens of our firefighters.

This study is my “why” which motivates, empowers and unites passion with purpose for people so as a change agent, I can impact and influence the fire service from the inside out to hopefully prevent suicide attempts and recognize suicide ideation in fire service personnel. As a researcher, scholar, teacher and chief officer, my study was designed to make an impact based on sound research through the eyes of firefighters, to assess, analyze and listen to what their needs are and how, as leaders and chief officers, we must respond courageously to our people’s needs. The impact is far reaching, beyond losing a firefighter in the fire station as families will be able to create a lifetime of memories, where “heroes” will use their ears to listen, hearts to love, and mouths to share empathizing words that validate the worst days on the job as a firefighter. My study was not intended for accolades or “atta’ boys” but to literally save lives which is the primary passionate drive engrained in a firefighter’s DNA in the service. Although my role as an Assistant Chief does not entail going inside fires for rescues anymore, my role as an Assistant Chief is to go inside the darker places in the minds of our people and serve them, rescue them from unknowns, and use my academic drive to change fire service leadership mentalities through intentional educative initiatives, relationally driven management, and passionately communicate that no one is replaceable because there is only one of each of us. My “why” is the love of the job, love of the people, love of the call to service, love for the tradition that unites people in the most unique profession on earth where people live together, work together, play together and at times, perform under the highest stress where traumatic events, images, sounds and smells linger for days, months and years. As a career firefighter, I understand the importance of peer relationships, peer support and how people need people above all else. As a scholar, I understand the importance of sound research, proven methodologies for analysis, and patience to produce the product that can change the lives of others. As a teacher, I understand the importance of

education, learning new approaches to solve problems, and creating platforms for people to thrive and be challenged while facing new heights. As a Chief Officer, I understand the importance of people as our greatest asset, where each person is irreplaceable and must be cared for as a person before a first responder. As a leader, I understand the importance of influence, decisiveness and competence to lead with fervor, always sharpening what I know and what I should know, and providing visionary direction to move people and organizations to new places of growth.

My hope is that this body of work educates, empathizes, empowers and engages the fire service to embrace traditionalism with new behavioral health initiatives based on sound research through the lens of firefighters who are people before and after the traumatic event. As leaders in the fire service, change necessitates openness, commitment and a willingness to be bold in the face of epidemic uncertainty. May we all truly be our brother and sister's keeper through relationships, responsibility and renovation of how we as helpers, help each other by creating a new culture of courage in the fire service.

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## Appendix A: Interview Guide

Date: \_\_\_\_\_ Interviewer: Brett M. Ellis

Location: \_\_\_\_\_ Tenure: \_\_\_\_\_ Age: \_\_\_\_\_

Gender: \_\_\_\_\_ Rank: \_\_\_\_\_ Education Level Completed: \_\_\_\_\_

Interviewee: Corresponding Letter and Number Identifier \_\_\_\_\_

Firefighters (A#), Driver Operators (B#), Company Officers (C#), Chief Officers (D#)

Researcher Describes the Study. Thank you in advance for sharing your experiences, I appreciate you participating in this research about how the fire service can better recognize PTSS in firefighters in relationship to traumatic events, based on lived experiences, that may help identify potential suicide ideation in firefighters in need of next-level care. The fundamental question I want to answer centers on *what* role does individual resilience, as well as formal and informal resources of behavioral health support, play in mitigating the impact of traumatic events?

I want to review the consent form and your voluntary participation. The fire department does not review the interviews and your participation is confidential. Your participation in this study is totally voluntary and you may withdraw at any time without adversely affecting your relationship with the investigator or the fire department.

Interview Questions:

(Begin Recording)

1. Please describe a situation in which you remember *how* your individual resilience contributed to a traumatic event you experienced within your career?
2. *How* do you cope with PTSS “symptoms” after a traumatic emergency call?
3. *How* do you receive behavioral health support from your Fire Department or other Organizations?
4. *How* do firefighters make the decision whether or not to ask for help?

(End Recording)

Thank the participant for their time and detailed descriptions, assure them of confidentiality of their responses.

## Appendix B: Consent Form

**Research Study Title:** “Creating a Culture of Courage”- Resilience, PTSS, and Suicide Ideation in Firefighters

**Principal Investigator:** Brett M. Ellis

**Research Institution:** Concordia University–Portland

**Faculty Advisor:** Dr. Bill Boozang

### **Purpose and what you will be doing:**

The purpose of this interview is to discover how individual resilience relates to lived experiences for firefighters who may need next-level behavioral health care, which in turn, will help us predict future firefighters at risk for suicide ideation. Your participation will help the fire service identify appropriate response mediums for firefighters of varying rank, tenure, education level, age, and gender, that will improve behavioral health initiatives. We expect approximately six to twelve (6–12) volunteers with 5–24 years of experience while engaging firefighters, Driver Operators, Company Officers, and Chief Officers.

You are being asked to be in this study because you were randomly selected from various firefighter organizations in the Texas area that fit the varying characteristics described above.

No one will be paid to be in the study. We will begin enrollment on in October, 2018, and end the study by October, 2019. To be in the study, you will volunteer approximately 15–20 minutes of your time by answering four (4) questions that center on resilience, PTSS Coping Mechanisms, and Organizational mediums that provide assistance for behavioral health of firefighters. Your identifiable information will not be stored with the data. Only the PI will have the data, under tight security, and the study will not identify you or any specific precinct or city in any publication or report.

### **Benefits:**

Information you provide will help shape pre-edification programs for new firefighters, appropriate post-incident responsive mediums for firefighter behavioral health, and needs of “soon to be” and retired firefighters who sacrificed so much in a career of service to others. This study will better identify groups of firefighters (based on sociodemographic identifiers) who may need next-level care before and after a traumatic event where PTSS can vary in degree yet is prevalent. You could benefit this initiative by representing the needs of firefighters, how your resilience has contributed to coping mechanisms, and/or how your organization or support system has helped your personal coping mechanisms for your own behavioral health. Your participation in this study will have a direct effect on how the fire service is able to address behavioral health for firefighters as we serve as our brother and sister’s keeper.

### **Confidentiality:**

This information will not be distributed to any other agency and will be kept private and confidential. The only exception to this is if you tell us abuse or neglect that makes us seriously concerned for your immediate health and safety.

**Confidentiality of Data:**

Interviews will be recorded; recordings will be transposed into written form, and recordings will be deleted immediately following transcription and member checking. All other study related materials will be kept securely for 3 years and then destroyed. The data will be stored on my phone and the information will be kept private on a flash drive to be stored in a fire safe with one key. Any field notes or printed documents will be shredded. After 3 years of storage, under lock-and-key, the data will be destroyed.

**Right to Withdraw:**

Your participation is greatly appreciated, but we acknowledge that the questions we are asking are personal in nature. You are free at any point to choose not to engage with or stop the study. You may skip any questions you do not wish to answer. This study is not required and there is no penalty for not participating. If at any time you experience a negative emotion from answering the questions, we will stop asking you questions.

**Additional Resources:**

Due to the sensitivity of this research study involving individual resilience of firefighters in relation to Post-Traumatic Stress Symptoms (PTSS).

Emergency Ministries Chaplain Group will be contacted and pre-arranged should any participants need a professional outlet for further behavioral health care needs. Emergency Ministries does not contact any employer after meeting with an individual. This option for participants is voluntary and in no way connects to their organization or job position.

**Contact Information:**

You will receive a copy of this consent form. If you have questions you can talk to or write the principal investigator, Brett M. Ellis. If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. OraLee Branch (email [obranch@cu-portland.edu](mailto:obranch@cu-portland.edu) or call 503-493-6390).

**Your Statement of Consent:**

I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study.

\_\_\_\_\_  
Participant Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

Brett M. Ellis  
\_\_\_\_\_  
Investigator Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Investigator Signature

\_\_\_\_\_  
Date

Investigator: Brett M. Ellis  
c/o: Dr. Bill Boozang  
Concordia University–Portland  
2811 NE Holman Street  
Portland, Oregon 97221



## Appendix C: Emerging Themes- Chiefs, CO's, DO's, & FF's

1. Please describe a situation in which you remember how your individual resilience contributed to a traumatic event you experienced within your career?

### *Chiefs*

- Officers need someone to tend to them so they can tend to others
- The circumstances leading to the traumatic event may be more troublesome than the event itself
- Chief Officers tear down the barrier with proper setting and approach

### *CO's*

- Displays of emotion and the perception of weakness in performance, FF is less likely to share
- The 5 senses contribute to situational recall

### *DO's*

- Faith and Prayer can help in Processing emotions and the realities of the Job
- For a believer, there can be a struggle with God as to the "WHY?"
- A death is a Death regardless of how and is still a loss

### *FF's*

- Peer Validation whether affected or not is of great value
- Pediatric Calls elicit a response- Emotional or apathetic
- Separation from Job to Life outside of Job is a mindset and takes reps for muscle memory with coping mechanisms such as Peer Validation

2. How do you cope with PTSS "symptoms" after a traumatic emergency calls?

### *Chiefs*

- Callousness becomes the responsive nature to the normalization of traumatic events
- Males working-out together signify a safe place to process a traumatic event
- Physical Activity and working out will accomplish physical fitness and aid in behavioral fitness

### *CO's*

- Who cares for the Officer if they are caring for the crew?
- Pre-Incident Relationships need to foster trust, openness, and require approachability
- FF's/CO's fill the emotional void with people, projects, and potentially harmful substances

### *DO's*

- Faith and a Prayer life (talking it out in a different way) helps process
- Spousal support may not be the best choice
- Men prefer activity, Women prefer relaxation

### *FF's*

- Primary means to cope is seclusion or physical activity
- There is a need for increased awareness through education but natural fire station settings tend to support courageous sharing
- Train Peers to function in natural FS settings with increased awareness\*\*\*\*

3. How do you receive behavioral health support from your Fire Department or other Organizations?

*Chiefs*

- Outside Support in the form of FF's could engage more FF's to share
- Trust, active listening, and empathy are primary relational values for FF's to build CO's

- If an FF or CO is a "loner" type, this would qualify as a high risk since time with crew before, during, and after a tragic event/rough call is necessary for rite of passage together for crew integration

*DO's*

- Chief Officer Support and Communication of Processes is key
- Trusting Relationships foster openness regardless of peers or counselors and takes time to build

*FF's*

- Spouses may not be the best medium for behavioral health support
- Spend time building relationships with peers/crew members
- Validation, Educative Processes, and Empathy are primary support triggers for FF's to share

4. How do firefighters make the decision whether or not to ask for help?

*Chiefs*

- Educated peers can help identify behavioral patterns in peers, therefore lessening the judgment and performance relationship within the crew dynamic
- Mentoring is key to create an empowering environment where the stigma of weakness is replaced with strength through cultural change

*CO's*

- By defining how FF's view "weak" in the service is predicated for sharing information
- Approach to the concern is equally important to the approachability of the officer-FF relationship
- Ego, perception of weakness, and punitive measures block FF's to asking for help
- How can CO's build the bridge over the walls to combat ego, perception of weakness/performance, and punitive measures?
- TRUST- Relational Values

*DO's*

- Fire Service needs to redefine weak vs strength
- Increased focus on Female FF's feeling empowered and equal in the Fire Service
- Behavioral health should not be looked at any different than medical health or injury

*FF's*

- Chief Officers should be Leaders who create a culture to share
- People who live with FF's the most (Peers and Family) should be attuned to behavioral mood changes and increased seclusion and/or increased work hours

## Appendix D: Chief Officer Responses Questions 1–4

1. Please describe a situation in which you remember how your individual resilience contributed to a traumatic event you experienced within your career?

**Descriptive** describing the content

- Pediatric call
- Defense mechanisms are built up over time by understanding your role
- “circumstances” over the call was more bothersome
- As BC, gotta mix old generation with new generation with emotional sharing and increased communication
- Mindset of “not failing” which drives purpose for career
- Discover the root cause by slowing down and embracing the process
- BC should set a tone, a calm demeanor, and care for their people
- FF Suicide in the station . . . day started off great
- FF’s noticed he was quick to get angry then went into seclusion
- Why at the Fire Station? He didn’t want to be alone when he was the loneliest
- AS a Chief, there is not a luxury to feel sorry for yourself since you have others to take care of so just stay busy
- Worst Statement “I know what you are going through”
- Found Sense of peace by talking with FF’s on and off duty

**Linguistic** specific use of language

- I did everything I could
- Alone
- Angry
- Circumstances
- Time

**Conceptual** key concepts

- Over time, defense mechanisms help in processing traumatic events, mainly the circumstances that drove the traumatic event
- FF Suicides occur at the station where the FF feels safe and cared for

2. How do you cope with PTSS “symptoms” after a traumatic emergency call?

**Descriptive** describing the content

- Rarely bothered, I don’t care other people’s pain (victim itself, not FF)
- Workout, physical activity- turn the brain off for a bit from the outside world
- Helplessness in the midst of traumatic event
- Scarred, callous to the “normalization” of calls
- Setting of some traumatic events affect in relation to personal situations in life (personal realizations)
- Don’t pass judgement, provide safe place with empathy
- Think about the process while you process
- Mentoring is key, seasoned vets with newer generation

**Linguistic** specific use of language

- Workout
- Normalization
- Empathy

- Process
- Mentoring

**Conceptual** key concepts

- The process to “processing” needs to be clarified and communicated
- Callousness becomes the responsive nature to the normalization of traumatic events
- Mentoring the newer generation to process the emotions through empathy in a safe place is key- Workout together and talk?

3. How do you receive behavioral health support from your Fire Department or other organizations?

**Descriptive** describing the content

- Find a balance of support and freedom
- EAP was hard to connect with FF’s
- Does not share with spouse so she won’t have to be subjected to it
- Looks for people to talk to with hopes of reciprocity
- Looks for traits of listening and trust, EAP is disconnected to FF’s
- PTSD Counselors included family members which was helpful
- Experts to help understand FD lifestyle of anger, sadness, and alone time is necessary to process
- FF’s outside of the FD, peers that you don’t work with, would be better
- Need to create an interdepartmental Co-Op

**Linguistic** specific use of language

- Support
- Reciprocity

**Conceptual** key concepts

- EAP is not effective for FF’s but counselors/experts who understand fire department life (in relation to traumatic calls) could help educate FF’s and their families
- Relationships in areas that create interdepartmental support may help FF’s open up since they don’t work with those specific FF’s but they still can empathize as FF’s
- Traits of trust, listening, and empathy are absolute necessities for FF’s to share

4. How do firefighters make the decision whether or not to ask for help?

**Descriptive** describing the content

- Unfortunately, they wait until there is no other choice
- FF’s try to self-fix before they hit rock bottom
- Ego and Tradition tells them they can’t show “weakness”
- Afraid of Judgement
- FS needs a zero-tolerance attitude to offer support for FF’s behavioral health
- FS needs regulated health mandates
- Get rid of the corporate attitude that we sacrifice the human element for performance benchmarks
- Need to call on Leaders to lead
- Watch and train for triggers
- Use performance skills/training to bridge emotional conversations

- Educate the staff and be accessible
- Worry about looking weak
- FF's reach a breaking point and peers notice it
- Create an empowering environment with tools that strengthen
- Establish traits and mentoring

**Linguistic** specific use of language

- Weak
- Ego
- Tradition
- Rock Bottom
- Support
- Leaders
- Educate
- Mentoring
- Performance

**Conceptual** key concepts

- Mentoring is key to create an empowering environment where the stigma of weakness is replaced with strength through cultural change
- FF's wait until the rock bottom due to looking weak and afraid of judgment in relation to performance
- Further training and education are necessary to shift perspective of weakness to strength before the breaking point through peer intervention training.

## Appendix E: Company Officer Responses Questions 1–4

1. Please describe a situation in which you remember how your individual resilience contributed to a traumatic event you experienced within your career?

**Descriptive** describing the content

- Adolescent Gunshot
- Occurred at dinner time
- Stared into pt's eyes (memory)
- 30 days later, had nightmares
- Recalled eyes, skin color, features
- Correlation with meal at time of the call
- Hoped images would go away over time
- Does NOT talk to spouse since they would not understand
- Veteran-Re-acclimation issues
- Machismo/looking weak is a problem
- Grows Numb over time through normalization
- Relationships matter and as the CO, pry enough to connect with crew
- Whole Family was killed in MVI
- Connection to family as a Parent
- Fire Station is home which equates to safety
- Remaining on scene for long periods of time in that environment is problematic
- Family- talking to your own on scene helps
- CO needs to talk to crew (work family) and start the convo
- Kitchen table convos/Tailboard talks
- Needs to spend time together off duty as well
- If FF's emote, they can get embarrassed and look weak in front of the CO's

**Linguistic** specific use of language

- Recall
- Numb
- Home
- Family
- Weak

**Conceptual** key concepts

- Fire House Crew is Family and family time happens at the station
- FF display of emotion is perceived as weak, which could affect the perception of job performance
- Recall with the 5 senses as well as call type can be an issue
- Re-acclimation to life away from the traumatic call and the fire station requires strong support system who can empathize

2. How do you cope with PTSS “symptoms” after a traumatic emergency call?

**Descriptive** describing the content

- Numbness
- Talking with crew helps
- As an officer, approachability matters

- Pre-incident relationships with those who show up to diffuse are necessary
- Setting is paramount to openness
- Family time helps
- Alcohol help your thoughts disappear
- Stay busy on day off
- Could choose to distance self from family
- On Shift- visit with crew
- Stay busy as a crew
- The CO has to be the strong one

**Linguistic** specific use of language

- Busy
- Family
- Approachability

**Conceptual** key concepts

- Over time, CO's become numb to the call and must be the strong one for the crew
- Officers should be approachable and accessible for FF's to feel comfortable talking about calls, emotions
- Alcohol, staying busy, time with others replace the time alone in seclusion so a person may not have to confront potential issues

3. How do you receive behavioral health support from your Fire Department or other organizations?

**Descriptive** describing the content

- Peer support increases crew integrity
- CISM
- Relationship history is important
- Sensory (touching) of pediatric was problematic
- Recall caused emotional release, hard cry in a short time
- Writing/journaling helped
- 5 senses affected recall
- Initial diffusing helps process with crew
- EAP and Chaplains
- Spend more time as a crew over the tour, assess crew 7–10 day mark
- Setting plays an important role- sitting out back, weight room, bumper of truck
- A Specific event following a tragic one confirms crew integration, rite of passage
- Crew realization that they are family and “in it” together
- Performance on the Fire Ground matters to the crews

**Linguistic** specific use of language

- Senses
- Time
- Setting
- Realization
- Performance

**Conceptual** key concepts

- There is a relationship between the 5 senses, especially touch with pediatrics, to recall
- Crews must spend time together to bond, before and after tragic events
- Crew integrity can be defined as experience, time, event, or relationship

4. How do firefighters make the decision whether or not to ask for help?

**Descriptive** describing the content

- FF's wait too long to ask for help
- Staying busy with station duties takes mind off of it
- Rank matters as Officers are more likely to talk with their bosses instead of FF's talking with the Officers
- As an Officer, perform a "size-up" of your people-Information gathering
- FF's are prideful and don't want to show weakness to their Officer
- Approach to sensitive conversation is paramount
- When their ego or macho mentality decreases
- They won't due to ramifications, punitive measures, and not being "fit for duty"

**Linguistic** specific use of language

- Busy
- Weak
- Macho
- Punitive
- Ego

**Conceptual** key concepts

- FF's in general, wait too long to ask for help and are less likely to go to their officer because they don't want to look weak in relation to performance on the Fire Ground
- Ego blocks the ability to seek help as well as punitive presuppositions if help is necessary
- CO's focus on crew and are more comfortable talking with their bosses than their FF's are comfortable talking with them

## Appendix F: Driver Operator Responses Questions 1–4

1. Please describe a situation in which you remember how your individual resilience contributed to a traumatic event you experienced within your career?

**Descriptive** describing the content

- Female- Pediatric Shooting
- Stared into Pediatrics' Eyes
- Disbelief that Pediatric was Dead, initially no emotional reaction
- 2<sup>nd</sup> Pediatric Call, finally emotional (even keeps a picture) increased sadness
- Increased age and Tenure have made Pediatric calls more difficult
- Increase in Prayer life and Faith Formation to help process
- Prays for the Family, not for self
- Talking may help
- Recall Helps Process-Male
- Loss of Brother FF- Nothing would have changed the outcome- Dr. Validated efforts
- Suppressed personal Grief for his peers
- Served as a sounding board for peers
- Tapped into faith, recognition that people are flawed in a broken world
- Personal relationship with person in a communal lifestyle still wasn't enough
- Suicide was still a personal decision
- Angry with God, confused but then experienced spiritual restoration
- Try to separate emotion from the call
- Move onto the next call
- Talk to Peers, Chiefs, Pastors for help

**Linguistic** specific use of language

- Disbelief
- Prayer
- Faith
- Emotions

**Conceptual** key concepts

- FF's may pray for the situation, family or self
- Restoration looks different for different people, one may recall the realities of the call and simply doing their job whereas another may recall the emotion associated where they allow themselves to Emote, feel sad to move on.

2. How do you cope with PTSS "symptoms" after a traumatic emergency call?

**Descriptive** describing the content

- Talk it out with Peers, Spouse, Pray
- Showing emotions are not abnormal for FF's
- Work out- Physical Activity
- Didn't ask to talk it out since no one else asked-Peer Validation Again
- Nightmares, Recall in Sleep
- Female- Watches TV then might Workout
- Prayer
- Talk with Spouse only because they understand (empathy) the life of a FF

**Linguistic** specific use of language

- Pray
- Peers
- Spouse

**Conceptual** key concepts

- Prayer is a coping mechanism for believers
- Men choose physical activity first, Women choose TV or relaxation first
- Spousal support is there but less likely if they can't empathize

3. How do you receive behavioral health support from your Fire Department or other organizations?

**Descriptive** describing the content

- Needs to know the counselor before meeting after a traumatic event
- More comfortable with someone you know when it comes time to talk
- Female- doesn't know if she can trust guys, more likely to talk to a female, doesn't want to be judged for being "weak"
- FF's are allowed time off if necessary
- Talked to counselors
- Chief Officer is proactive with support

**Linguistic** specific use of language

- Relationships

**Conceptual** key concepts

- Gender can play a role in peer sharing due to assumed traditional fire service culture
- Counselors are of value if they meet FF's before the debrief of an event

4. How do firefighters make the decision whether or not to ask for help?

**Descriptive** describing the content

- Old mentality "deal with it" makes you weak- Fire Service needs cultural shift
- Asking for help is the last thing a FF would do since it's ego driven
- FF's need to learn to communicate feelings
- Seclusion, Aloneness is a precursor to Suicide
- Suicide in the Station with "brothers" in a safe, family place
- When it is affecting family life
- We need a symptom measurement
- A female FF wouldn't want guys to know they needed help
- Performance judgement is associated with asking for help
- Mood swings in the fire house can lead to suicide awareness

**Linguistic** specific use of language

- Weak
- Ego
- Performance

**Conceptual** key concepts

A cultural shift is necessary to move from "weakness" to strength

- FF's who commit suicide or may consider suicide are likely to do it at the Fire Station where their "brothers and sisters" can save them
- Performance judgement, especially with Female FF's is accelerated if they ask for help
- Mood swings and seclusion are key indicators for peers to watch for

## Appendix G: Firefighter Responses Questions 1–4

1. Please describe a situation in which you remember how your individual resilience contributed to a traumatic event you experienced within your career?

**Descriptive** describing the content

- Pediatric CPR-Death-One was affected negatively, one was affected negatively that the call did not affect them until peer validated
- Gathered Info, Carried Equipment-Performed job duties
- New Mother (FF) and did not affect her as a mother but was somewhat more affectionate with own baby
- Bothered that She wasn't bothered
- Questioned emotion or lack thereof
- Found Value in Debrief
- Felt better with Peer Validation as one who wasn't affected either
- Recalled Parents sounds, look on face
- Recognized the deep emotional impact on the Family
- Faith aspect- doubted God's presence and tried to reason faith as to "WHY?"
- Had to separate the job from the "WHY"
- Peer Conversation helped- prompted by a TV Show
- Faith is foundation for Coping

**Linguistic** specific use of language

- Peer Validation
- Pediatric CPR
- Separation

**Conceptual** key concepts

- FF had no reaction to Pediatric Death
- FF had a recall reaction to Pediatric Cardiac Arrest
- Pediatric Calls cause self-reflection and FF's to ask "Why?"

2. How do you cope with PTSS "symptoms" after a traumatic emergency call?

**Descriptive** describing the content

- Coping mechanism is seclusion X 2
- Talk with Peers
- Talk with Spouse since they will listen even if they don't understand
- Create Awareness for avenues to vent, especially to peers
- Issues randomly are solved at the Fire Station
- FS needs stress education so there is courage to approach the topic
- Physical Activity, watching TV in seclusion, then having "tailboard talks" with crew to create social value

**Linguistic** specific use of language

- Seclusion
- Sharing
- Physical activity

**Conceptual** key concepts

- Seclusion becomes reactionary
- Peer talks happen in the context of the fire station where FF's feel courageous and safe
- Spouses will listen even if they don't understand
- Issues solved randomly at Fire Station vs Education and Creation of awareness opportunities

3. How do you receive behavioral health support from your Fire Department or other organizations?

**Descriptive** describing the content

- Should know where to get help before the event
- Value in education
- Have approachable Chief Officers
- Peer Intervention Is primary
- Crew is primary then friends, then Spouse
- EAP is problematic if there is an immediate issue
- Peers validate and empathize
- Barriers are pride, ego, don't know where to go (process)
- Spouses get grossed out from call types
- Need to know the Counselors before the event

**Linguistic** specific use of language

- The "Event"
- Approachable
- Peers (crew)
- Validation and Empathy

**Conceptual** key concepts

- Chief Officer should be approachable and educated in the system or processes for their people and communicate the process in FF's language
- Crew is primary, then friends, then Spouse but Spouse may not be able to empathize or validate so how valuable are they?

4. How do firefighters make the decision whether or not to ask for help?

**Descriptive** describing the content

- When there is a noticeable change in mood, shorter temper, easily angered
- FF's work more than usual
- FF's work so much they don't always recognize the symptoms or issues
- When Chief Officers open up with their FF's, they are more likely to share
- FF's may seek peer help when they see other FF's affected negatively
- FF's need clarity moments from friends, peers, or spouse
- Self-Recognition
- Look for physical changes in peers
- Behavioral shifts
- Increased time in seclusion

**Linguistic** specific use of language

- Work more

- Behavioral Shifts
- Seclusion
- Anger

**Conceptual** key concepts

Behavioral shifts of seclusion, anger, and increased work hour should key in on potential issues

- Peers sharing help other peers and increase accountability and self-awareness

## **Appendix H: Behavioral Health Initiatives**

1. Curriculum Development and Implementation (Based on Dissertation Findings)
2. Pre-Incident Edification Programming for New Hires
3. Peer Support Standard Operating Guideline (SOG)
4. Recruit and Train Peer Support Team
5. Post-Incident Response Training
6. Peer Support Relational Memorandum of Understanding (RMOU)
7. Peer Co-Op Response Team (PCORT)
8. Identify Clinicians for Behavioral Health Support

## Appendix I: Sociodemographic Form

Please answer the following questions accordingly for research sample grouping by circling the most accurate answer. This form was created by Brett M. Ellis.

### 1. Gender

*What is Your Sex?*

- Male
- Female

### 2. Age

*In what year were you born?* \_\_\_\_\_

### 3. Education

*What is the highest degree or level of school you have completed? If currently enrolled, mark the previous grade or highest degree received.*

- High school graduate - high school diploma or the equivalent (GED)
- Some college credit, but less than 1 year
- 1 or more years of college, no degree
- Certification Program (Junior College)
- Associate degree (for example: AA, AS)
- Bachelor's degree (for example: BA, AB, BS)
- Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)
- Doctorate degree (for example: PhD, EdD)

### 4. What is your current Rank in the Fire Department?

- Firefighter
- Driver Operator (EO)
- Lieutenant
- Captain
- Division Chief
- Battalion Chief
- Assistant Chief
- Fire Chief

### 5. Tenure

*Select from the tenure groupings below based on number of service years in the Fire Department.*

- 1–4 years
- 5–15 years
- 16–25 years
- 25–33 years
- Retired (please mark total number of years upon retirement) \_\_\_\_\_

## **Appendix J: Statement of Original Work**

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

### **Statement of academic integrity.**

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

### **Explanations:**

#### **What does “fraudulent” mean?**

“Fraudulent” work is any material submitted for evaluation that is falsely or improperly presented as one’s own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate’s final work without full and complete documentation.

#### **What is “unauthorized” assistance?**

“Unauthorized assistance” refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another’s work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

**Statement of Original Work (continued)**

**I attest that:**

1. I have read, understood, and complied with all aspects of the Concordia University–Portland Academic Integrity Policy during the development and writing of this dissertation.
2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the Publication Manual of The American Psychological Association



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Digital Signature

Brett M. Ellis

Name (Typed)

8/22/2019

Date