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Veteran Paramedics' Experience of Managing Work-Related Trauma: A Qualitative Study

Ryan D. Jenkins
The University of Notre Dame Australia

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Ryan D. Jenkins

B.A (Psych.), PGD (Psych.), T.A. Psych., M. Couns., M. App. Psych.

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School of Arts and Science

Fremantle Campus

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Declaration

To the best of the candidates' knowledge, this thesis contains no material previously published by another person, except where due acknowledgement has been made. This thesis is the candidate's own work and contains no material which has been accepted for the award of any other degree or diploma in any institution.

Human Ethics

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007, updated 2018). The proposed research study received human research ethics approval (Appendix A) from the University of Notre Dame Australia Human Research Ethics Committee (EC00418) on February 22nd, 2016, Approval Number #016001F.

Signature: Ryan D. Jenkins

Name: Ryan D. Jenkins

Date: January, 2020

Abstract

Paramedics throughout the world are trained to competently treat the physical injuries of patients requiring pre-hospital emergency medical care. The nature of this work exposes them to highly traumatic and often life threatening situations. As a result of working with this stress and trauma, they themselves can experience emotional, psychological, and physical trauma (Gayton & Lovell, 2012). Research suggests that they receive little education and training about how to effectively manage this trauma (Gayton & Lovelle, 2012) and that many paramedics experience symptoms of Burnout, Post-Traumatic Stress Disorder (PTSD), or Depression (Beaton, 2006; Millar, 2004; Shakespeare-Finch, 2006). The impact of working with trauma affects individual paramedics, families, paramedic organisations, the paramedic profession, and members of the community who seek ambulance services around the world. Some studies suggest the implications of this impact contributes to an average five-year work life among the paramedic workforce in one Australian state (Streb, Haller & Michael, 2014) but veteran paramedics appear to be an anomaly of resilience among the paramedic population. The current qualitative study investigates the veteran paramedic's experience of managing work-related trauma and aims to identify trauma management strategies that contribute to the longevity of their career. Interviews were conducted with twelve veteran paramedics and data were analysed using Interpretative Phenomenological Analysis (IPA). Results identified five main themes, each with their respective sub-themes. The results of this study were expected to contribute toward strengthening paramedic resilience, to benefit the families of paramedics families, paramedic organisations and contribute toward the improvement of care for patients.

Keywords: Ambulance, Veteran Paramedic, Trauma, Management, Resilience, IPA

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Glossary of Abbreviations

ABC (News) - Australian Broadcasting Corporation

ABS - Australia Bureau of Statistics

AHPRA - Australian Health Practitioner Regulation Agency

ALS - Advanced Life Support

CISD - Critical Incident Stress Debriefing

EAP - Employee Assistance Program

EI - Emotional Intelligence

EMS - Emergency Medical Services

EMT - Emergency Medical Technician

IPA - Interpretative Phenomenological Analysis

NEMSMA - The National Emergency Medical Services Management Association

PCM - Process Communication Model

PTE - Potential Traumatic Event

PTG - Post Traumatic Growth

PTSD - Post Traumatic Stress Disorder

RDM - Resilience Development Model

US/USA - United States of America

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Chapter 1: Introduction

Saving lives can be rewarding and personally gratifying, but managing the emotional and psychological impact from frequent exposure to patient trauma can have detrimental consequences (McAllister & McKinnon, 2008). Dealing with work-related trauma on a daily basis can result in debilitating effects on paramedic well-being, their families, paramedic organisations and the emergency medical treatment paramedics provide to patients (Whitfield, 2010). Each day, paramedics respond to a wide range of potentially traumatic events for both paramedics and patients, such as physical injury, failing health, assault, natural disasters, severe motor vehicle accidents, and fatalities (De Backer, 2011; Kirkwood, 2012). In some areas of the world, paramedics receive more daily emergency calls, and are exposed to more trauma situations, than fire and police services combined (Regehr, Hill, Goldberg & Hughes, 2003). Unfortunately, the impact of this frequent exposure can create unexpected problems for paramedics with life threatening consequences (Kirby, Shakespeare-Finch & Palk, 2011).

1.1 The Significance of the Problem

Over time, the 'emotional rollercoaster ride,' resulting from the high frequency, intensity, and duration of exposure to trauma, can have seriously detrimental implications (Gayton & Lovell, 2012; Shakespeare-Finch, 2006). In 2012, whilst speaking to fellow emergency services personnel, the President of the NEMSMA (the National Emergency Medical Services Management Association) issued an invitation to the academic community to help address an international resilience crisis among paramedics (Kirkwood, 2012). The NEMSMA President at the time petitioned researchers to help address the growing incidence of Burnout, Depression, Post-Traumatic Stress Disorder (PTSD), and the growing incidence of suicide among paramedics (Kirkwood, 2012; Streb, Haller & Michael, 2014).

In 2011, 34 paramedics died by suicide in the United States with another 41 dying from suicide in 2012 (Pignataro, 2013). In Western Australia (WA), four paramedics died from suicide over a three-month period in 2014, two of which occurred within the same week (ABS, 2015; See Appendix B). The increasing incidence of suicides among paramedics is occurring on a global scale and is of grave concern for paramedics, the families of paramedics, paramedic organisations, hospitals, government health departments, and

numerous related health care organisations (Gayton & Lovell, 2012). Following the suicide deaths of two WA based paramedics, paramedic union representatives insisted that more trauma counselling be provided for paramedics to help mitigate the risk of suicide (The Age, 2015; See Appendix B).

Four months after the paramedic unions insistence, WA's Chief Psychiatrist, was commissioned by the local government to investigate the spate of paramedic suicides over the past five years (ABC News, 2015; See Appendix B). The following day, a WA member of parliament also called for a parliamentary inquiry to investigate the most recent incidence of paramedic suicides (The Age, 2015; See Appendix B). Emergency services, governments, and communities around the world are seeking answers regarding how to address the increasing incidence of paramedic suicides. The paramedic profession has joined other high risk suicide professions, such as emergency doctors (Timmermans, 2008), military war veterans (Lin et al., 2015), police officers (Papazoglou & Anderson, 2014), social workers (Carson, King & Papatraianou, 2011) and trauma counsellors (Fischman, 2008). The short duration of paramedic careers and increased incidence of paramedic suicide around the world continues to be a concern(Gayton & Lovell, 2012). Questions have arisen from contradictory research literature around the topic of paramedic resilience which has undermined conceptual clarity (Luthar & Cicchetti, 2000).

1.2 A Potential Solution

The anomalies of attrition rates among the paramedic population appear to be veteran paramedics, who remain in the workforce despite more than a decade of working with trauma (Streb, Haller & Michael, 2014). It may be possible that veteran paramedics have learned and developed coping and resilience strategies which have helped them effectively manage the trauma they work with so regularly. Unfortunately a limited literature base exists about veteran paramedic resilience and the strategies they use to manage work-related trauma. By staying in the workforce for more than 15 years, they appear to defy the five-year career average work-life among paramedics (Streb, Haller & Michael, 2014). During the review of existing literature, few empirically grounded resilience training programs could be identified specifically designed to help paramedics build resilience and minimise the risk of being affected by the trauma they work with. This does not suggest that they do not exist but does suggest that they may not be as prevalent within the paramedic profession. Resilience

training programs were readily identified in the existing literature among emergency service professions such as police (Papazoglou & Tuttle, 2018), military (Crane et al., 2019) and nursing (Chesak et al., 2015), but no studies could be identified which explored the applicability of existing resilience training programs in emergency services or military, with paramedics.

Studies and statistical data suggest that paramedics appear to be at the pinnacle of pre-hospital emergency treatment and exposure to trauma (Regehr, Hill, Goldberg & Hughes, 2003), yet compared to other emergency medical professions very few specifically designed resilience training and trauma management programs could be identified which help mitigate the detrimental effects of working with trauma. Based on the apparent limited literature in this area, one could hypothesis that the paramedic attrition rates could be influenced by these factors and that may contribute to increased symptoms of PTSD, depression, and increasing incidence of suicide but much more research would be needed to help find empirical evidence to support such hypotheses and speculative statemens. In an attempt to secure insight and information, the current study focuses on better understanding the veteran paramedic experience of managing work-related trauma. It is anticipated that the results of the current study could contribute toward the development of improved intervention and support strategies for paramedics to help address the trauma related difficulties that they experience, and help improve the longevity of their career. Working approximately three times longer than the five-year average (Streb, Haller & Michael, 2014) may suggest that veteran paramedics have learned some effective strategies to manage work-related trauma rather than remaining in the profession by chance. Other possibilities could also account for the longevity of the veteran paramedic career but these will be discussed in a subsequent section.

The current study was designed to help explore the veteran paramedics experience managing work-related trauma in hopes of identifying how they cope with trauma, what management strategies they employ, if they are unique to each individual, if there are commonalities of trauma management strategies among them, and any other contributing factors that can be identified. It is also hypothesised that if effective trauma management strategies can be identified in vetearn paramedics, that trauma resilience training programs may be able to be developed to help address the work-related trauma challenges that paramedics experience and help address the increasing incidence of paramedic suicides.

Insights from the current study may also be gained which could contribute to other professions affected by work-related trauma, thus benefiting employees and their organisations. There were many reasons why the current research topic was chosen by the researcher. It was chosen out of personal experience and interest, the researcher having worked in the medical fields of radiology, paramedicine, and surgical medicine, for a total of seven years. Friends, acquaintances, and family of the researcher still work in various medical fields, and it is hoped that the current study could benefit them in some way. On a professional level, the researcher currently works as a psychologist, specialising in the areas of critical incidents and trauma, in both clinical and organisational settings. After becoming increasingly aware of the limited paramedic studies compared to less trauma exposed emergency services professions, hearing the plea for research help to the academic community by NEMSMA President in 2012 (NEMSMA, 2019), the increasing incidence of suicide among local paramedics, this topic was chosen for the current research. Having first-hand knowledge of the challenges that paramedics experience, and working on a daily basis to help individuals and organisations manage trauma, it was determined that veteran paramedics would provide the best source of information for addressing the hypotheses previously stated.

Research suggests that the personal impact of trauma varies between people psychologically, cognitively, emotionally, socially and physiologically (Duplechain, Reigner & Packard, 2008). Other studies in this field also suggest that the differences in trauma impact can be influenced by an individual's past experience, or lack of experience with trauma, and how they have learned to manage confronting trauma situations (Berry, Ford, Jellicoe-Jones & Haddock, 2015). For example, one individual may either be more traumatised or less traumatised, due to personal history and familiarity with traumatic events. Another individual, who has never been exposed to one particular traumatic event, may handle a new traumatic event very easily, or very badly, depending upon their history of effective management of past traumatic events (Brown, 2015). If past trauma has been managed poorly or suppressed, then subsequent trauma could be more likely to be compounded (Berry, Ford, Jellicoe, Jones & Haddock, 2015). Some trauma theories suggest that if past trauma has been managed in an effective manner, then subsequent trauma of a similar nature could be more manageable to mitigate (McCoy, Como, Greene, Laskey & Claridge, 2013). It is unknown if a general concept such as this could be applicable to

paramedics, due to the increased frequency, intensity and duration of trauma exposure that paramedics experience compared to the general population, but may be interesting for some to note.

1.3 Definition of Terms

1.3.1 Defining paramedics.

To help answer questions associated with trauma management and career longevity in veteran paramedics, one must first understand what is meant by the term paramedic. The term Paramedic varies across different parts of the world, and countries have different definitions, structures and levels of competency (Anderson et al., 2012; EMT Training, 2015; Govender, Sliwa, Wallis & Pillay, 2016; Paramedics Australasia, 2015; (Roudsari et al., 2007). Ambulance crews typically work in teams of two individuals. One person is generally a less qualified junior team member, and the other, a senior member of the team who is typically a more experienced paramedic.

Many countries, excluding Australia (discussed later), base their paramedic standards and training after the USA system, due to its strong and up-to-date medical practices (Petter & Armitage, 2012). The USA system also has historical pre-eminence, with one of the first hospital based ambulance operations commencing in1865 (Barkley, 1978). In the U.S., 'paramedics' are called Emergency Medical Technicians (EMT). Some variation may exist from one state to another but generally speaking, EMTs have many similar levels of training across the USA (EMT Training, 2015). Typically, three levels of training exist among EMTs in the USA. These three levels are: EMT - Basic (B), EMT - Intermediate (I), and the EMT - Paramedic (P) (EMT Training, 2015). The EMT (B) provides a basic competency level of medical diagnosis for illness and injury, diagnosis and treatment. Basic EMT training is conducted over a six to fifteen week period and consists of 120 minimum hours of classroom training followed by practical placement. The EMT (I) includes all of the EMT (B) skills and competencies with additional in-class training, competency training, and practical skills training, and includes more advanced life support training (EMT Training, 2015). The EMT (P) is often what is referred to as a 'Paramedic' or 'Medic' in the USA. A Paramedic is the highest level of EMT training available and receives an additional 18 to 24 months of extensive training above that of the EMT (B). The EMT Paramedic is typically the leader of the ambulance crew and carries the greatest responsibility for ensuring the best possible

pre-hospital care for patients. The highest level of advanced life support skills and training are acquired at the EMT (P) level. In the USA paramedicine system, these distinct levels of EMTs help members of the public and other medical professionals, differentiate levels of authority, training and competencies, to help ensure patient safety and quality of pre-hospital medical care (Govender, Sliwa, Wallis & Pillay, 2016).

In Australia, the paramedic registration and training system is quite different and there was no registered body which monitors or regulates the training and competencies of paramedicine practitioners prior to December 2018 (AHPRA, 2018; Munro, O'Meara & Mathisen, 2018). Australia does have independent, private paramedic organisations which facilitate a collective voice for its paramedic members, but until December 2018, these organisations were not governed by any overseeing body and had no governing rights or registration regulations over its members (AHPRA, 2018; Moritz, 2018). One such private organisation is Paramedics Australasia (2015), which promotes itself as speaking on behalf of its paramedic members. Of the total 17, 323 paramedics within Australia, 3,256 (approximately 19%) are members of Paramedics Australasia (Paramedics Australasia, 2015). As such, the organisation provides paramedics with a voice for change in health services, legislation, and clinical practice. The aim of Paramedics Australasia is to help shape and implement changes for the betterment of quality patient care (Paramedics Australasia, 2015). Because no governing body has overseen the registration, training, and competencies of Australian paramedicine workers for so long, it has been difficult to provide clear definitions about the different roles that ambulance workers play and the differences in paramedicine competency. Due to the lack of clear registration and governance of the paramedic profession in Australia for so long, the terms ‘paramedic’ and ‘ambulance officer’ have often been used synonymously, regardless of their level of competency (Munro, O'Meara & Mathisen, 2018).

Paramedics Australasia has outlined some differences between levels of paramedicine competencies, but the following definitions are not standardised definitions by any governing or regulating body. Within Australia, the Basic Life Support Medic (BLSM) must have a minimum of a certificate IV in health care to be employed on an ambulance team. The BLSM is trained in advanced first aid, provides basic life support, and typically works under the direction and seniority of the more advanced trained senior paramedic (Paramedics Australasia, 2015). According to Paramedics Australasia (2015), the ambulance officer with the title of ‘Paramedic’ is required to have a Bachelor’s degree, a Postgraduate Diploma, or a

Masters degree in Paramedical Science (Ambulance). Paramedics carry the majority of the responsibility to oversee the pre-hospital treatment of patients. For the purpose of the current research, the term 'paramedic' will be used in reference to this senior member of the ambulance crew (EMT Training, 2015; Paramedics Australasia, 2015) who is trained in the highest level of paramedicine competencies. Unfortunately due to the lack of paramedic registration and governance until 2018 within Australia, the generalisation of the term 'paramedic' creates some issues among the public, and within the paramedicine profession, as it can be misleading and unclear about paramedic competencies. These issues and concerns will be discussed in subsequent sections of this dissertation.

1.3.2 Defining trauma.

Trauma can be defined in many ways from many different perspectives. Paramedics observe and interact with patients who have experienced physical trauma through injury as well as interacting with the patient's family members, both of whom can experience emotional and psychological trauma by observing the injuries of their family member. The current study investigates the emotional and psychological impact that work-related trauma (working with patient injuries) has on veteran paramedics. In order to help provide clarity for the reader about what trauma is, to help put the veteran paramedics' management of trauma into context, and to help the reader better understand the experience of veteran paramedics, trauma is defined in two ways: First, as any life threatening physical injury which requires treatment from doctors in hospital emergency departments (Dinh et al., 2016; Dinh et al., 2017). A few examples of trauma that paramedics work with on a regular basis include physical injury sustained by a person during sport, severe motor vehicle accidents, health problems such as heart attacks or someone who has been involved in a mining accident.

The second definition of trauma, or trauma impact, is defined as the emotional or psychological distress an individual experiences resulting from exposure to a physically traumatic injury (Lang et al., 2014). As not all paramedics may consider the same situations to be 'traumatic,' the term potentially traumatic event (hereafter referred to as PTE; van der Velden et al., 2020) will also be used where trauma impact is subjective and not clearly known. These definitions have been provided to help the reader differentiate between a traumatic patient injury and the emotional and psychological impact that a paramedic may experience while working with a patient who has sustained a traumatic injury.

1.3.3 Defining resilience and paramedic resilience.

Luthar and Cicchetti (2000) define resilience as an individual's ability to positively adapt to the negative experiences of significant adversity and trauma. It can also be defined as the process of mitigating the negative effects of stress by positive behavioural adaptations (Mallack, 1998). Due to the high paramedic attrition rates, and increased incidence of paramedic suicides, resilience has increasingly become more of a focus of discussion in the global paramedic community over the past 10 years (Kirkwood, 2012; Streb, Haller & Michael, 2014). Trauma studies suggest that a combination of deficits in trauma management training, and the unrelenting emotional and psychological impact from repeated exposure to work-related trauma, are among the greatest challenges to paramedic resilience and attrition (Clohessy & Ehlers, 1999).

Such studies do not suggest that paramedics lack resilience, but they do suggest a strong relationship between prolonged exposure to trauma and declining levels of resilience (Streb, Haller & Michael, 2014). Research conducted by Streb, Haller and Michael (2014), found that resilience among newly graduated paramedics gradually increased over the first five years of their career, but this period was followed by a marked and continued decline in resilience. Streb and associates suggest that the initial growth in resilience over the first five years was primarily due to desensitisation, resulting from repeated exposure to the same types of PTEs. Streb found that the marked decline in resilience after the five year mark accompanied an increase in different mental health symptoms, such as depression, anxiety, PTSD, and burnout. Streb's study found the same five-year resilience increase and marked decline across the majority of the paramedic populations they studied, except among veteran paramedics. No known studies have investigated veteran paramedics and why they were an exception to the reduced resilience phenomena, or how they were able to work longer than the average five-year work life of other paramedics. Burnout was identified as a contributing factor to paramedic attrition rates because it is the outcome from long-term persistent exposure to stress, trauma and/or lower levels of resilience to begin with (Bober, Regehr & Zhou, 2006; Shih, Jiang, Klein & Wang, 2013).

1.3.3 Burnout.

Burnout is defined as an outcome of chronic emotional, psychological or physical fatigue, which limits, or completely inhibits, an individual's full functioning capacity (Bianchi, Truchot, Laurent, Brisson & Schonfeld, 2014). Employee burnout can occur when an employee's typical work capacity is compromised by physical, emotional and psychological fatigue (Arvay & Uhlemann, 1996). Paramedic research suggests that burnout may be one of the main contributing factors to the short, five-year average work career among paramedics (Alexander & Klein, 2001). Research suggests that many variables can contribute to employee burnout and that many determinants can influence the high intensity, long duration, and frequent exposure to work-related stress (Sandstrom, Rhodin, Lundberg, Olsson & Nyberg, 2005). Other studies support the notion that prolonged exposure to intense traumatic situations can result in symptoms of burnout (Paton & Violanti, 1996), an increased risk of depression, and symptoms of PTSD (Pignataro, 2013). For example, one particular paramedic study found that 90% of paramedics displayed symptoms of Post Traumatic Stress Disorder (PTSD; Beaton, 2006).

1.3.4 Post traumatic stress disorder (PTSD).

Post Traumatic Stress Disorder (PTSD) is a pathological response and chronic mental health condition, which can occur as a result of personally experiencing or witnessing a traumatic event (American Psychiatric Association (APA), 2000). PTSD occurs in approximately 8% of the general population in the USA, 7% of the general population in Europe, and 7.2% of the general population in Australia (Cooper, Metcalf & Phelps, 2014), with higher rates among women than among men (De Vries & Olff, 2009; Marshall, Schell, Glynn & Shetty, 2006; Kessler, Chiu, Demler & Walters, 2005). Some symptoms of PTSD are: visual flashbacks of the trauma, sleep disturbances, exaggerated startle response, feelings of anxiety, avoidance of discussion or reminders of the trauma, memory loss about the trauma, and intrusive thoughts (Streb, Haller, & Michael, 2014). PTSD can be debilitating, often eroding the mental and physical health of its victims and placing them at greater risk of anxiety, depression and suicide (Hidalgo & Davidson, 2000). Research continues to investigate the reasons why some trauma victims develop symptoms of PTSD while others do not, when exposed to the same event (Mattson, James & Engdahl, 2018).

Studies suggest that an increased understanding of the differences between those who develop PTSD symptoms and those who do not, under the same conditions, is a key component in mitigating the effects of trauma and establishing preventative measures (Savic, Knezevic, Matic & Damjanovic, 2018). Over the past five years, PTSD research suggests a prevalence of PTSD among the paramedic population, which has created concerns for the well-being of paramedics on a global scale (Michael, Streb & Häller, 2016). A study conducted in Switzerland explored PTSD and comorbidity (additional co-occurring symptoms of other disorders) among 1363 paramedics (Haller, Michael & Koechlin, 2009). Participants took part in a one-month investigation to assess the prevalence of PTSD symptoms they experienced. Results found statistically significant scores associated with depression and accompanying psychosomatic symptoms of PTSD. Haller and associates (2009) also found that participants who were not prepared with stress management coping strategies, not only felt emotionally and psychologically compromised, but were eight times more susceptible to a clinical diagnosis of PTSD, than those who felt prepared with stress coping strategies during a traumatic event. Results from Haller's study suggested that 93.6% of all paramedics who participated in the study, displayed symptoms of PTSD, as well as various secondary physical symptoms, depressive symptoms, or symptoms of all three. To help combat work-related stress identified from their study, Haller and associates (2009) recommended more training for paramedics in preventative and early intervention strategies to help manage trauma impact. The recommendations consisted of additional education and training to help identify stress indicators and learning numerous different types of stress management techniques.

Another PTSD study among paramedics investigated PTSD symptoms from 668 participants (Streb, Haller & Michael, 2014). Streb and associates explored the correlational relationship between a paramedic's level of resilience and their optimistic attitude toward positive outcomes, or 'Sense of Coherence' (SOC) (Streb, Haller & Michael, 2014). Results found that paramedics who had learned emotional and psychological stress management strategies for working with trauma, reported less severe PTSD symptoms and higher levels of SOC than those who were not prepared in the same way. Results from the Streb and associates (2014) research found that high levels of resilience and SOC were negatively correlated with symptoms of PTSD, suggesting that PTSD symptoms could be reduced among paramedics with further training and development in resilience strategies and SOC.

Streb also suggested that SOC could help reduce symptoms of PTSD in paramedics but did not investigate what types of resilience strategies would help paramedics effectively manage working with trauma. These studies, among others (Haller et al., 2009; Streb et al., 2014), highlight the possibility that paramedics do not receive sufficient emotional and psychological preparation to work with the trauma to which they are regularly exposed.

1.3.5 Post traumatic growth (PTG).

While some people who are exposed to trauma experience symptoms of PTSD, others have found ways to overcome the negative impact from trauma exposure and experience Post Traumatic Growth (PTG). PTG is defined as the personal growth that occurs within oneself, from emotionally and psychologically reconciling a traumatic event (Chopko, Palmieri & Adams, 2018). Studies suggest that people who experienced PTG following a traumatic event were able to emotionally and psychologically reconcile the trauma impact, while people who continued to experience symptoms of PTSD long after a traumatic event were not able to reconcile the impact they experienced (Shuwiekh, Kira & Ashby, 2018). Studies suggest that there are numerous contributing factors to PTG (Shuwiekh, Kira & Ashby, 2018), many of which will be discussed in more detail in subsequent sections of the current study.

The variables determining whether an individual experiences PTG or symptoms of PTSD following a PTE appear to be unknown, but one would hope that future research in these areas could help future paramedic students better prepare for managing work-related trauma throughout their career. A relatively small number of known quantitative studies have explored the work-related stress that paramedics experience and the coping mechanisms they employ. However, few qualitative, phenomenological studies have explored the paramedic's experience of managing work-related trauma (Connor & Davidson, 2003). The current paramedic study contributes to the very limited number of existing qualitative studies and makes the unique contribution of exploring the veteran paramedics' experience among the paramedic population. More specifically, the study seeks to contribute to the existing literature base by investigating how veteran paramedics manage work-related trauma and remain within the paramedic workforce for more than 15 years.

1.4 Aims of the Research

The overarching aim of the current study was to contribute toward mitigating trauma impact for paramedics in the future and to identify any strategies that veteran paramedics used which may help increase the overall resilience for paramedics or other high risk trauma professions. The specific aims of the current study were to; first, make a unique contribution to the existing literature about trauma management for paramedics. Second, to gain an increased knowledge, and understanding, about the veteran paramedics' experience managing trauma. Third, knowledge gained by the current study is anticipated to contribute toward addressing the difficulties that paramedics experience. It is anticipated that the in-depth information regarding how veteran paramedics manage trauma could help provide greater insight into the personal and professional strategies they have used, and how these may have contributed to their longevity in the workforce. Results may have implications for better understanding about how to improve paramedic retention rates, reduce emotional and psychological impact of working with patient trauma, contribute to resilience training for paramedics and possibly other professions frequently exposed to PTEs, and ultimately, help reduce the incidence of paramedic suicide.

1.4.1 Research questions.

Veteran paramedics were chosen as participants in this qualitative study because of their demonstrated capacity to work in the industry for more than 15 years, as opposed to research that suggests the average paramedic work life to be approximately five years(Streb, Haller & Michael, 2014). Very little research has been undertaken regarding veteran paramedics' experience and how they manage work-related trauma. The general overarching research question of the current study is: What can be learned from veteran paramedics about resilience throughout their career? With such limited knowledge and understanding about this question, the following specific research questions were posed to point the study in the direction of answering the following research questions:

1.) What is the veteran paramedic's experience of managing work-related trauma?
2.) What factors contribute to the longevity of a veteran paramedics career?

Based on these questions, the aim of the current research is to understand the veteran paramedic's experience of how they manage working with trauma for more than 15 years. Despite experiencing the impact of working with trauma so often, numerous variables could have contributed to the veteran paramedics' effective management of work-related trauma and career longevity. For example, some participants may have remained in the profession due to financial commitments while others may have remained in the profession due to their age and believing they are too old to recommence studies or change professions. Others may have remained in the profession for the social benefits, out of obligation to support colleagues, or moral commitment to help save lives and for the betterment of society. Regardless of what may have motivated participants to remain in the profession, the fact remains that they have continued to do so for more than 15 years and the current study investigates the emotional and psychological strategies they may have been employed throughout their career to do so. From the perspective of learned strategies to effectively manage work-related trauma, it is possible that some of these variables were learned and developed over time, while others may have been naturally acquired as part of their personality attributes, and still others may have been influenced by organisational exigencies. The current study seeks to find answers to the above research questions.

1.5 Investigative Rationale

1.5.1 Epistemological perspective: Constructivism

The theory of how and why knowledge is acquired in relation to the justification, rational and nature of knowledge and belief is defined by Stroud (2011) as epistemology. A constructivist epistemology attempts to ascertain how an individual constructs meaning from their lived experience (Creswell, 2009; Crotty, 2009). A constructivist epistemological approach was selected for the current study to help gather knowledge about how veteran paramedics acquired strategies for managing trauma because the researcher concluded that this approach would be the best option for gathering the required personal, in-depth, and relevant data for the current study.

1.5.2 Theoretical perspectives.

As a broad theoretical perspective, interpretivism is an important aspect of the current study because the objective of interpretivist research is to understand, and interpret, the constructed meaning of human behaviour and one's experience rather than generalise and attempt to predict cause and effect (Neuman, 2000). Using this type of phenomenological focus is suited to exploring the experience of paramedics because they experience PTEs on a daily basis and it is through the frequency, intensity and duration of trauma exposure that they become 'experts' within their own lived experience. This phenomena of personal expertise is explored in the current study to determine whether or not veteran paramedics have learned trauma management strategies which may help them manage working with trauma more effectively than their more 'novice' counterparts. Personal experiences of trauma may be more likely to be deemed as credible and dependable than information acquired by another individual's observations.

Further, the extensive details and facts that participants provide during interviews may yield congruence with the stories of others, thus providing a more comprehensive picture of the concept under consideration (Errico & Hunt, 2019). As additional important aspects of the investigative rationale in the current study, hermeneutics (Patton, 1990) will be discussed as an important aspect of interpreting participant data as well as idiography (Smith, Flowers & Larkin, 2009). Employing the use of a hermeneutic and an idiographic lens is likely to help enrich a phenomenological understanding of the participant's experience because hermeneutics and idiography each allow a focus on different aspects of the paramedics experience. The three important aspects of; investigative rationale, interpretivism, hermeneutics and idiography, are mentioned here to help provide theoretical consistency between the introduction of these three aspects and the further discussion in the methodology section (Chapter 3) of the current study.

1.5.3 Methodology:

Qualitative research and Interpretative Phenomenological Analysis.

In qualitative methodology, the gathering of data, analysis, and reporting are predominantly undertaken in narrative form (Teddie & Tashakkori, 2009). Theorists suggest that conducting research from a qualitative perspective is advantageous when there is a need to understand the meaning behind a lived experience by looking at the overall picture from a holistic view rather than examining a single facet (Ary, Jacobs, Razavieh & Sorenson, 2006; Denzin & Lincoln, 2003). Qualitative research is different from quantitative research in several ways. First, qualitative research does not start with a theory, as does quantitative research, but seeks to find patterns or themes of meaning from an individuals' unique perspective or experience. Second, qualitative research is typically a continuous process that commences with the first interview and gradually makes connections from one participant to the next, which progressively begins to tell a story from one participant to another. In order to facilitate the expression of concepts and meaningful narrative information, participants are typically asked open-ended questions, of a general nature, to encourage help them to ponder and expound upon them. This type of constructivist epistemological approach was applied to the current study to help gather information about the lived experiences of twelve veteran paramedics who were all exposed to work-related trauma of varying degrees and nature.

It is important to note the high degree of interpretation that exists in qualitative research (Smith, Flowers and Larkin, 2009; Willig, 2012). Understanding the importance of how qualitative data is interpreted can help readers better understand the results of a study and how the results were achieved. Interpretation of participant data is at the centre of qualitative research because it is concerned with the meaning of what a participant is saying and the process of how they make meaning from their lived experience. Qualitative researchers often work under the assumption that one's actions are always meaningful in some way and that it is through the process of engaging with those meanings, that increased understanding through deeper insights can be acquired about relevant social and psychological processes. In addition, qualitative data does not stand alone in speaking for itself but requires meaning to be made of it by the researcher. Given that qualitative research relies so heavily on the meaning-making of participants, one might expect qualitative research in psychology to be closely associated with the work of interpretation.

According to Willig (2012), this has not always been the case and the relationship between qualitative psychology and interpretation has been an uneasy one. Fortunately, this uneasy relationship between interpretation and qualitative research has changed over the past decade (Willig, 2012). The current study explores the lived experience of veteran paramedics through a qualitative methodological approach utilising an Interpretative Phenomenological Analysis (IPA; Smith, Flowers & Larkin, 2009). The use of IPA in qualitative research can have several benefits (Tuffour, 2017). For the current study, IPA was chosen as the preferred approach for many reasons. First, IPA was chosen due to its capacity to elicit rich, meaningful, in-depth information from participants about their own lived experience. Second, the rich, in-depth participant information allows researchers to make meaning from, and gain a clearer understanding about what a participant has experienced. Third, IPA allows all aspects of a participants' experience to be considered, such as culture, perception, beliefs, emotion, and bias. Fourth, IPA encourages the consideration of all participant information, can help provide the context of narratives, and can help better identify discourses and metaphors discussed during the interview process (Tuffour, 2017). Fifth, and most importantly, IPA was identified as the best approach to elicit sufficient salient data to answer the research questions and most effectively achieve the desired aims of the current study.

The researcher of the current study believed that IPA would help acquire the rich, in-depth data from veteran paramedics about all aspects of the veteran paramedics' lived experience. Using IPA was expected to help provide an increased clarity of interpretation and meaning about how participants managed trauma to help answer the research questions. By considering all aspects of the veteran paramedics experience, in the appropriate context, the researcher expected to gain the most understanding possible about how participants made meaning from working with trauma and how they managed it. These reasons help provide the rationale about why IPA is beneficial, why IPA was chosen, and its relevance to veteran paramedics.

1.6 Chapter summary

In summary, the trauma-related difficulties that paramedics experience working with patient trauma appear to be occurring on a global scale. Experiencing the negative effects of working with patient trauma regularly may contribute to high attrition rates, significant mental health challenges and in some instances, suicide among the paramedic population. Veteran paramedics may hold answers about paramedic resilience through how they have managed work-related trauma throughout their career. Through using a qualitative and phenomenological approach with veteran paramedics, it is anticipated that common themes and trauma management strategies could be identified. Information gathered from the current study could help provide insight about veteran paramedics that may help provide answers about mitigating work-related trauma that paramedics experience. A review of existing literature will now be undertaken to help provide context to the reader about trauma resilience theories, models, professions frequently exposed to work-related trauma, and other associated factors relevant to the current study.

Chapter 2: Review of Existing Literature

2.1 Introduction

In exploring the existing literature a narrative review, or general review method, was used. This approach considers the most critical and important aspects of the current knowledge of a research topic and is typically defined by the researchers research objectives (Baker, 2016). Multiple mediums were used in an attempt to search out the existing and relevant literature pertaining to the current study. The variety of approaches commenced by conducting a general search of existing literature and gradually narrowing the search to the most relevant and salient literature which was seen to best help answer the research questions. The search began with a personal visit to Notre Dame University library and accessing the Notre Dame library online resources, to review doctoral dissertations, the online repository and online research databases through the library portals. Database searches included, but were not limited to; CINAHL Plus with full text, Directory of Open Access Journals, Google Scholar, Health Reference Centre Academic, Informa Healthcare Journals, Medline/PubMed, OneFile, PEDro, ProQuest variants, Science Direct (Elsevier), Scopus, Academic Search Premier, Australia/New Zealand Reference Centre, eBook Collection (EBSCOhost), EconLit with Full Text, Education Source, Health Source - Consumer Edition, Health Source: Nursing/Academic Edition, Humanities International Complete, Information Science & Technology Abstracts, Literary Reference Center, Philosopher's Index, APA PsycArticles, Psychology and Behavioral Sciences Collection, APA PsycInfo, SocINDEX with Full Text.

Internet searches were also conducted across multiple browsers, reviewing relevant governing and regulating bodies of emergency medical services. Universities and paramedic training institutions were also contacted by phone and via email in the USA, Asia Pacific, United Kingdom, and Australia to enquire about paramedic training programs, training curriculum and any additional associated literature relevant to the current study. The large majority of literature reviewed consisted of peer reviewed journal articles in the fields of psychology, medicine, military, police, trauma and emergency services. The search topics and professions reviewed consisted of, but were not limited to; emergency medical services, paramedics, ambulance officers, police, firefighters (dual trained as paramedics), emergency medical technicians, emergency medical professions, emergency services workers, disaster relief workers, resilience, trauma, trauma resilience, trauma impact, emotional trauma, psychological trauma. Recent research and background information was also explored about

leading researchers in these fields and topics of study. As relevant literature was identified and reviewed, the bibliography was explored for each study to help identify relevant literature. These methods helped provide the researcher with background knowledge and awareness about the existing literature and its relevance to the current study and the research questions. The following literature review is the result of the above methods.

Numerous professions throughout the world can be directly exposed to trauma and can become vulnerable to its negative impact. Some of the most common professions exposed to frequent trauma include police services (Papazoglou, 2013), emergency services staff (Stevenson, Phillips & Anderson, 2011), disaster relief workers (Zimering, Gulliver, Knight, Munroe, & Keane, 2006; Shigemura et al., 2012) and the military (Seligman & McBride, 2011; Deuster, 2014). Many of these professions are exposed to PTEs on a daily basis and to various degrees of frequency, intensity and duration. Accordingly, literature relating to high trauma exposed professions will be examined. Research suggests that the population size in which these professionals work increases the risk of trauma impact (Croft et al., 2019; Strauser, Lustig & Uruk, 2006). For example, the frequency of exposure to trauma is more likely to be lower in a small rural community compared to a large metropolitan city with millions of people. Accordingly, a paramedic in a large city may be more likely to be exposed to more intense trauma, for more hours in the day, with more frequent ambulance calls and an increased likelihood of street violence than a small rural community. As such, within the literature associated with each of the professions mentioned above, the following trauma related conditions are also investigated in the review of literature; emotional intelligence, support networks, cognition, personality, past experience with trauma, trauma training, and organisational support. These conditions have been specifically included because they have some aspect of relevance with the current study, which will be discussed in greater detail in the results section.

2.2 Existing Theoretical Frameworks

As existing theoretical frameworks underpin the present study, these will be considered prior to engaging in a review of the above literature. A number of empirically grounded theoretical constructs in the area of resilience from both an organisational and individual perspective underpin the current study of paramedic trauma (Gibson & Tarrant, 2010; Richardson, 2002). The following organisational and individual resilience models have

been chosen for several reasons. First, the researcher wanted to identify individual and organisational resilience factors which could influence working with trauma. Second, past studies suggest that individual and organisational factors may influence trauma impact and how paramedics manage work-related stress (Bonanno, 2004; Gibson & Tarrant, 2010). Gibson and Tarrant (2010) suggest that the individual resilience of employees within an organisation can influence the resilience of the whole organisation just as much as an organisation's resilience can influence the resilience of its employees. Third, the following models collectively help identify a wide range of important individual and organisational factors to consider which are directly relevant to help answer the two research questions in the current study. Fourth, these models were chosen because many aspects of resilience appear to be similar to veteran paramedics. A number of more recent and more commonly known resilience models were identified in the review of existing literature (Kunicki & Harlow, 2020; Rees, Breen, Cusack & Hegney, 2015; Seligman, 2011; Stoverink, Kirkman, Mistry & Rosen, 2020) but the resilience models outlined in the current study were chosen due to their relevance and applicability to research questions, the paramedic industry and paramedic organisations.

2.2.1 Individual models of resilience.

2.2.1.1 The Metatheory of Resilience and Resiliency (Richardson, 2002; Richardson, Neiger, Jensen & Kumpfer, 1990).

The Metatheory of Resilience and Resiliency is a conceptual model that evolved over three different studies, forming what Richardson (2002) calls, 'waves' of resilience. The first study was conducted to help identify the individual characteristics of people who effectively coped with and experienced personal growth as a result of the difficulties they experienced. The second wave explored the process of how people acquire the characteristics of personal growth from exposure to trauma and adversity. The third study explored how to recognise the level of one's own resilience and then consciously increase that level of resilience. As a result of these studies, resilience was conceptualised as a force within each individual that drives one to seek self-actualisation, altruism, wisdom, and to be in harmony with a higher spiritual strength. A primary assumption of Richardson's theory is the concept of a required bio psycho spiritual balance (or internal homeostatic state of mind, body and spirit), which allows individuals to effectively cope with life stressors (2002).

Richardson's *Metatheory of Resilience and Resiliency* suggests that each stressful event interferes with an individual's state of homeostasis and is either an opportunity to learn, grow, and become more resilient or creates disruption to life and personal growth is undermined. Some primary protective factors were suggested by Richardson (2002) which influence individual resilience. These protective factors were based on personal beliefs involving faith in spiritual or supernatural forces of some kind; such as chi, quanta, God, or a Holy Spirit. Richardson (2002) suggests that there is no specific time frame required in the development of resilience, but that the process of individual learning and growth from a traumatic event can occur in a matter of seconds or over a number of years. According to Richardson's theory, resilience development only comes through the disruption of our psychological homeostatic state, and has four possible outcomes:

(1) *Resilient Reintegration* (into typical life functioning), where adaptation leads to a higher baseline level of homeostasis than prior to the traumatic event.

(2) *Reintegration to the Original Homeostatic State*, where one returns to the original baseline state of homeostasis as they were prior to the event.

(3) *Reintegration with Loss*, where a partial recovery takes place with some degree of functioning but the individual carries some degree of loss with them, which negatively affects the individual and increases vulnerability.

(4) *Dysfunctional Reintegration*, where maladaptive strategies are used to cope with the trauma, substantially limiting their ability to return to pre-trauma functioning.

Now that these four types of reintegration by Richardson (2002) have been outlined, they will now be explained in greater detail. Richardson suggests that *Resilient Reintegration* is the optimal outcome from a traumatic event and involves a learning process, where personal development and growth occurs as an outcome following a traumatic event, thereby facilitating a strengthening of resilient qualities. This concept is also consistent with the *Principles Model of Resilience* (Gibson & Tarrant, 2010) for organisations, which also suggests that *resilience is an outcome* of a learning process, not the process itself.

Reintegration to the Original Homeostatic State is described by Richardson (2002) an individual returning to the same level of pre-trauma functioning as prior to the traumatic event but without the learning and growth process taking place. Richardson proposes that an additional protective factor called 'bio psycho spiritual homeostasis' exists in this reintegration process, which contributes to the healing and helps move past the traumatic event. Richardson suggests that for some individuals it is not possible to return to the same pre-trauma level of functioning in instances of permanent loss, such as the death of a loved one or a permanent physical disability. While *Reintegration to the Original Homeostatic State* is still a degree of recovery from trauma, it is not considered to be part of developing resilience through growth and an active learning process.

Reintegration with Loss suggests that people relinquish a degree of motivation, hope, or drive, due to a sense of unmanageable demands from life stressors (Richardson 2002). In other words, this type of reintegration suggests that people do not return to pre-incident functioning but instead, carry the trauma with them as they re-experience degrees of emotional and psychological distress on a regular basis. For example, the trauma resulting from an unresolved loss of a loved one, might elicit an emotional reaction whenever the lost loved one is remembered in the future (Davis, 2001).

Dysfunctional Reintegration is described by Richardson (2002) as a dysfunctional coping strategy used to avoid or 'numb' the emotional or psychological impact following a traumatic event. This dysfunctional strategy often creates compounding issues and can result in the formation of counterproductive cycles or patterns in one's life. For example, a traumatised person might abuse drugs to help them cope by 'numbing out,' thereby becoming dependent on the drug to cope, which in turn can result in an addiction and additional complications. *The Metatheory of Resilience and Resiliency* Model below (Figure 2.1) helps illustrate the various degrees of resilient responses:

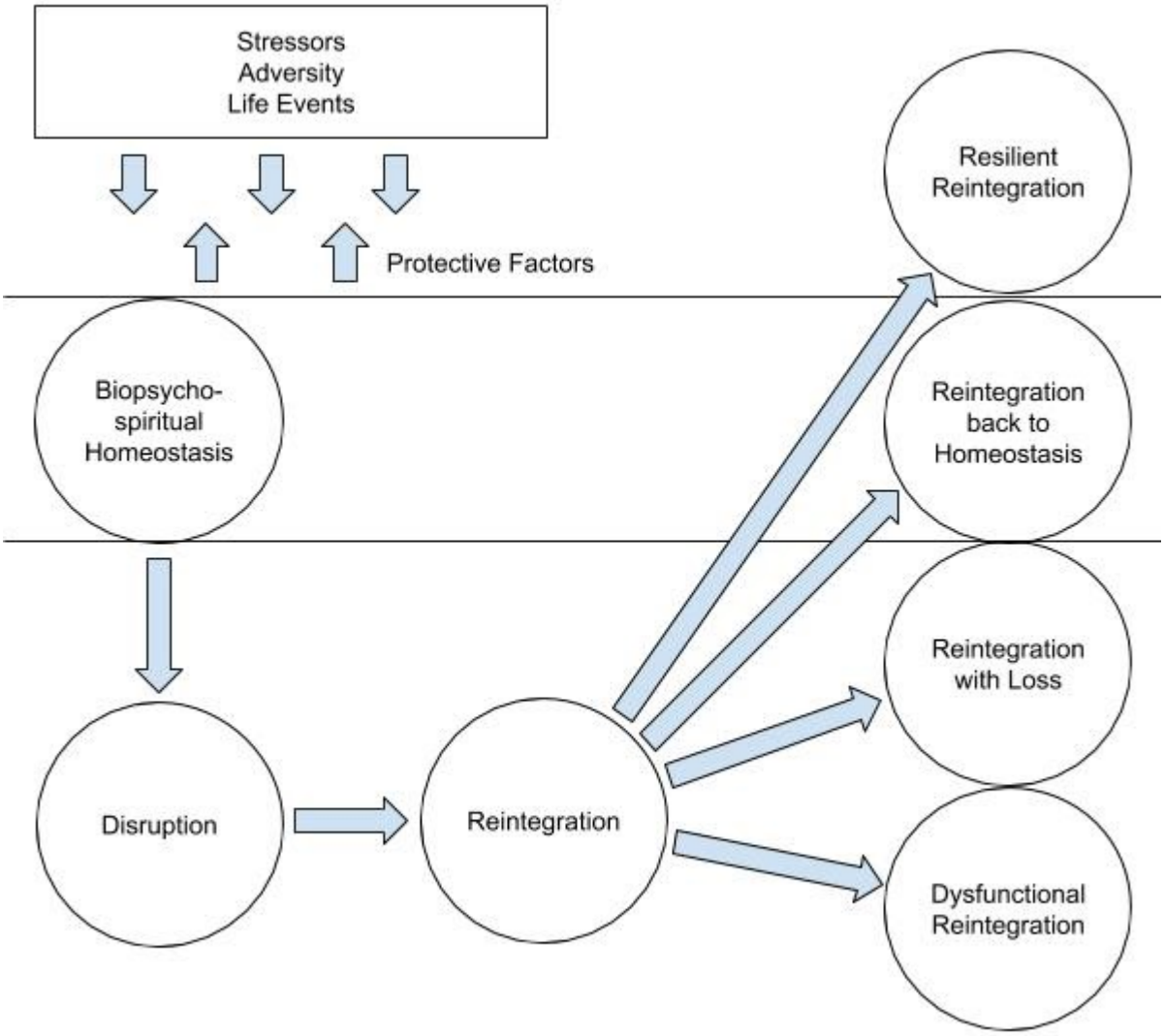

Figure 2.1. The Metatheory of Resilience and Resiliency (Richardson, 2002) shows the impact and personal life 'Disruption' from a stressful event and the various types of reintegration. Richardson. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*, p. 311.

Studies in other areas of resilience have found similar types of reintegration as did Richardson such as support groups for women (Dunn, 1994), adult children of alcoholics (Walker, 1996) and university students (Neiger, 1991). Richardson's *Metatheory of Resilience and Resiliency* (2002) has relevance to the current study because veteran paramedics reported different types of reintegration following each exposure to a traumatic event and many similarities of reintegration among participants were identified, which will be discussed further in the subsequent discussion section of this thesis. When considering Richardson's *Metatheory of Resilience and Resiliency*, it is important to note that Richardson based his theory on a single traumatic event pertaining to a particular role, relationship, or experience. This should be considered in its application to the multiple exposures to trauma that paramedics are likely to experience compared to isolated events referred to by Richardson (2002). Richardson did make recommendations that additional research should be conducted with high-risk trauma groups who are exposed to multiple trauma events, suggesting that each exposure to trauma could elicit a different reintegrative choice (Richardson, 2002). The current paramedic study follows Richardson's research recommendation for a high-risk group and multiple trauma exposure. The reintegration process of veteran paramedics is a very relevant process to consider, especially if it contributes to effective trauma management, career longevity and the resilience of paramedics. The relevance of this theory with the current paramedic study will be discussed further in subsequent sections of this dissertation.

2.2.1.2 O'Leary and Ickovics Resiliency Model (O'Leary and Ickovics, 1995).

O'Leary and Ickovics Resiliency Model (1995) has similarities to Richardson's 2002 reintegration theory, but appears to focus more on the learning and growth process of resilience where Richardson's focus was more on an outcome. O'Leary and Ickovics' theory suggests that each emotional and psychological difficulty which arises provides an individual with opportunities for change through growth. O'Leary and Ickovics suggest that each individual responds to trauma in one of three ways – *Survival, Recovery,* or *Thriving. Survival* suggests that an individual who is exposed to a traumatic event continues to function, but becomes functionally impaired in areas such as social interaction and employment, or experience a loss of interest in hobbies enjoyed prior to the traumatic event. An example of *Survival* would be an employee who was traumatised from a workplace

robbery who may not be able to continue working due to the anxiety induced by work environment triggers that remind them of the robbery. The traumatised employee has 'survived' the ordeal but recovery to pre-incident functioning is inhibited by the psychological and emotional impact of the traumatic event.

Recovery is defined by O'Leary and Ickovics (1995) as returning to the same emotional, psychological and functional capacity as prior to the traumatic event. *Recovery* suggests that the individual has emotionally and psychologically recovered from the traumatic event and has re-engaged in the same social interactions, hobbies, and functional capacity as before the trauma occurred. Using the previous robbery example, *recovery* would be demonstrated by the employee returning to the same work location and performing the same job functions and daily activities without any negative psychological, emotional or behavioural impact. O'Leary and Ickovics (1995) suggest that *thriving* after a traumatic event is when an individual surpasses the original level of psychological and emotional functioning by growing, flourishing, and adding value to life. The concept of *thriving* suggests that a traumatic event has been emotionally and psychologically reconciled and personal growth has occurred. *Thriving* suggests that the individual has effectively managed the trauma impact, which in turn has facilitated a behavioural, cognitive and/or emotional transformation and improved their resilience and overall sense of well-being. O'Leary and Ickovics (1995) suggest that *thriving* occurs when traumatic events psychologically and emotionally challenge internal beliefs and allow them to make positive adjustments to unhelpful beliefs or thoughts. O'Leary and Iskoviks suggest that it is the confrontation and review of an individual's belief systems which facilitates the *thriving*, resulting in new, more resilient decisions being made about one's life. To help illustrate the concept of *thriving,* the above robbery example will be referred to. Prior to the robbery the employee may have naively believed that all people are inherently good and everyone does the right thing. The robbery then forces the employee to challenge and redefine this belief and associated thinking, to a new belief that not all people are inherently good or do the right thing. The individual then experiences a learning and growth process that overcomes their initial naive belief, and they feel more educated and better informed to protect themselves in the future. O'Leary and Ickovics (1995) suggest that *thriving* can also alter social status resulting in new social roles, such as becoming the leader of a group or restructuring life priorities. Figure 2.2 demonstrates the *O'Leary & Ickovics Resiliency Model*:

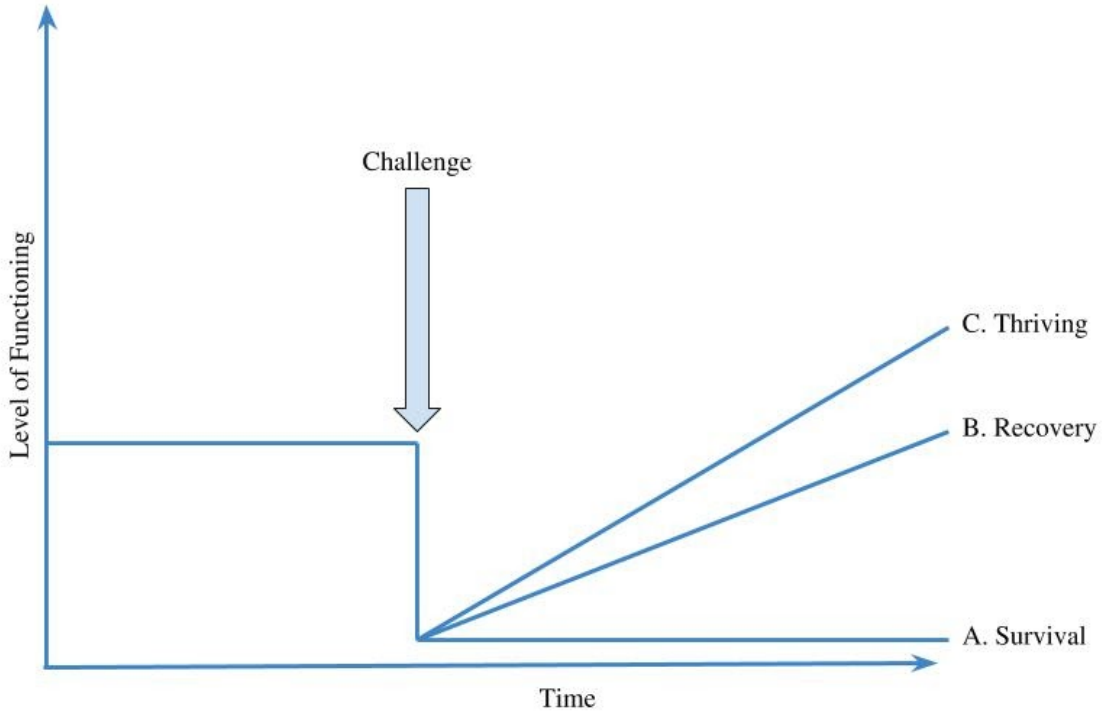

Figure 2.2. O'Leary & Ickovics Resiliency Model (1995) shows the reduced Level of Functioning following the 'Challenge' from a stressful situation and its ongoing impact over time by O'Leary, V. E., & Ickovics, J. R. (1995). Resilience and thriving in response to challenge: an opportunity for a paradigm shift in women's health. *Women's Health: Research on Gender, Behaviour, and Policy, 1*, p. 133.

O'Leary and Ickovics' Resiliency Model (1995) is very relevant to the current veteran paramedic study because participant experiences could have similarities with the theory of *Thriving, Recovery* and *Survival.* This begs the question, do veteran paramedics manage work related trauma in similar ways as outlined in O'leary and Ickovics Model (1995) of survival, recovery or thriving? The answer to this question and more in depth information between *O'Leary and Ickovics Resiliency Model* and the current paramedics study, will be outlined in the discussion section. Another individualist theory relevant to the current paramedic study is the *Constructivist Self-Development Theory* (Saakvitne, Tennen & Affleck, 1998).

2.2.1.3 Constructivist Self-Development Theory (Saakvitne et al., 1998).

The *Constructivist Self-Development Theory* suggests that people use adaptive strategies to help manage threats to personal integrity and safety following a traumatic event (Saakvitne et al., 1998). During a traumatic event, Saakvitne and associates (1998) suggest that individuals exhibit five functional states:

1) *Frame of reference*
2) *Self-capacities*
3) *Ego-resource availability*
4) *Psychological needs,* and *cognitive schemas*
5) *Perceptual and memory system*, which consists of biological (neurochemical) adaptations and sensory experience.

Saakvitne and associates (1998) describe *frame of reference* as the individual perception of self and how they give meaning to their experience of the world around them. *Self-capacities* refers to the individual's ability to recognise, tolerate, and effectively integrate into the world around them, whilst simultaneously maintaining self-awareness and a connection with others. *Ego-resource availability* is described as the ability to meet one's own psychological needs, in a mature way, through the cognitive and emotional processing of information. Threats to *psychological needs* (and associated cognitive schemas) involve the avoidance, or removal, of potential threats to personal safety (emotional, physical and psychological). It further involves trust in self and others, control of self and situations, self-esteem (including confidence), and physical, emotional and sexual intimacy.

Constructivist Self-Development Theory (Saakvitne et al., 1998) proposes that when exposed to a traumatic event, the individual must integrate the context and the potential consequences of the trauma into their existing belief system about self and others. According to Saakvitne and associates, the *perceptual and memory system* of their theory is when the cognitive abilities are influenced by the intensity of the somatic (physical), affective (emotional), and interpersonal components of the traumatic experience. They also suggest that the impact a traumatic event has on an individual is influenced by the intensity of the situation and the individual's coping strategies at the time of the event. Saakvitne suggests that the more overwhelming and intolerable experiences are for an individual, the greater the

need for psychological and emotional safety. For some people, the need to find psychological and emotional safety is so urgent, that the mind uses dissociative (emotional detachment) and amnesia defences (trauma induced memory loss) to help create emotional or psychological safety from the trauma. The traumatic event and its implications must then be incorporated into an individual's frame of reference and schemas about their primary psychological needs.

The *Constructivist Self-Development Theory* (Saakvitne et al., 1998; Saakvitne, Tennen & Affleck, 2010) emphasises that growth and pain are not only inextricably linked, but they are vital to an individual's ability to recover from trauma. Saakvitne and associates suggest that if an individual learns, develops, and grows as a result of trauma, they experience post-traumatic growth. Post traumatic growth is defined as the personal growth outcome that occurs from a traumatic experience, often creating a link between an individual's understanding of the event, and the personal meaning they make of the traumatic event (Saakvitne et al., 1998; Saakvitne, Tennen & Affleck, 2010). Research in the area of post traumatic growth is an emerging field in theoretical resilience (Berger & Weiss, 2006; Jayawickreme & Blackie, 2014; Michael & Cooper, 2013; Shakespeare-Finch & Lurie-Beck, 2014; Tan, 2013).

2.2.1.4 The Posttraumatic Growth Model (Tedeschi & Calhoun, 2004; Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018).

Tedeschi and Calhoun originally developed *The Posttraumatic Growth Model* (1996; 2004) and define post traumatic growth (PTG) as the cognitive, emotional and psychological growth that takes place within an individual as an outcome from reconciling a traumatic event. PTG is influenced by individual perception, beliefs, and automated distress response, while incorporating their past experience of adapting to trauma. This model was recently updated in 2018 (Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018). The *PTG Model* suggests that post traumatic growth creates a significant 'shift' in one's beliefs about the world, themself, spirituality, sense of mindfulness, and even acceptance without resignation. Tedeschi and associates propose that the struggle of working through personal trauma is what produces the post traumatic growth, not the trauma itself. *The Posttraumatic Growth Model* suggests that an individual must simultaneously engage their existing coping mechanisms and their cognitive processing of the traumatic circumstances to help manage the associated emotions (Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018).

According to the *PTG Model*, the extent of cognitive processing is central to the post-traumatic growth process because it facilitates the effective analysis of cognitive and emotional information from a traumatic event. An individual's social system may also play an important role in the growth process, particularly through the development of new beliefs, life schemas and support themes (Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018). The *PTG Model* suggests that PTG is closely related to the development of general wisdom about life and how a person effectively adapts to traumatic events throughout their life. The basic concept of the *PTG Model* is that a growth process is set in motion by a traumatic event, which severely challenges, or even shatters, an individual's understanding of where they belong in the world. PTG is acquired after recovering and reconciling a traumatic event, often leaving the individual with a renewed and more defined sense of self than prior to the traumatic event. The *PTG Model* suggest four specific elements that accompany the positive transformative changes of PTG:

1) PTG occurs most distinctively in the aftermath of high level stress and trauma rather than during low-level stress and trauma.

2) PTG appears to go beyond observed recovery.

3) PTG is experienced more often as an outcome rather than as part of a process or coping mechanism.

4) PTG requires the shattering of basic beliefs or assumptions about one's life that does not occur from moderate to low-level stress.

Figure 2.3 outlines *The Posttraumatic Growth Model* by ***Tedeschi, Shakespeare-Finch, Taku & Calhoun*** (2018):

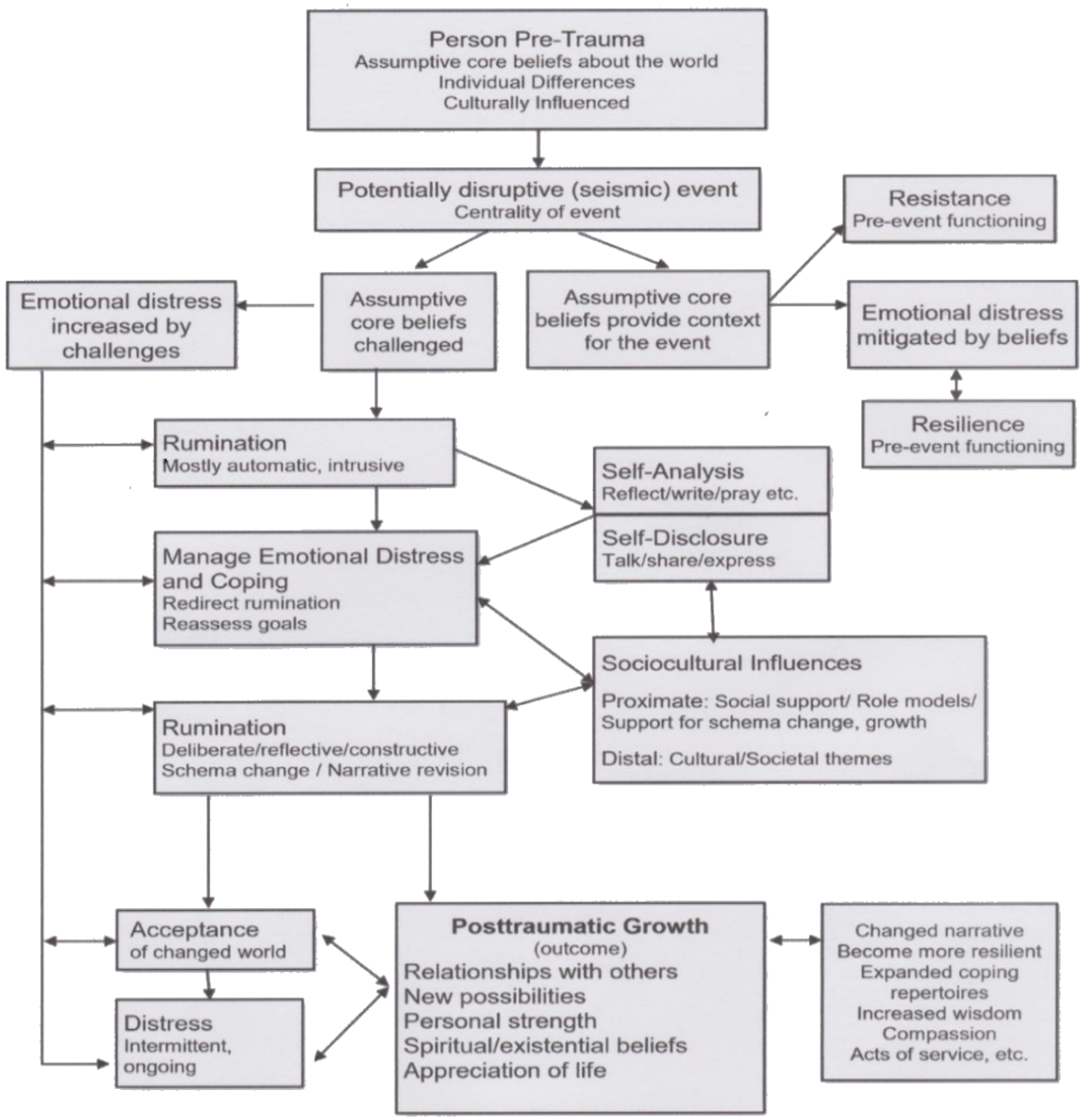

Figure 2.3. *The Posttraumatic Growth Model* (Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018) shows how the variables of management of emotional distress, fundamental schemas and life narrative contribute to post traumatic growth following a life challenge. Tedeschi, R. G., Shakespeare-Finch, J., Taku, K., & Calhoun, L. G. (2018). *Posttraumatic Growth: Theory, Research and Application.* New York, NY: Routledge

Tedeschi and associates *Posttraumatic Growth Theory* leads to some interesting questions in relation to veteran paramedics. Subsequent studies to Tedeschi and Calhoun's original work (1996) suggests that paramedics do experience PTG (Shakespeare-Finch, Smith, Gow, Embelton & Baird, 2003; Shakespeare-Finch, Gow & Smith, 2005). It would be interesting to investigate at what stage in a paramedic's career PTG develops and how PTG contributes to the longevity of a veteran paramedics' career in managing trauma. These queries and how they relate to the current paramedic study will be discussed in more detail in the discussion section of this dissertation. Now that individual models of resilience have been shown, organisational models will now be discussed with relevance to veteran paramedics.

2.2.2 Organisational models of resilience.

2.2.2.1 Principles Model of Resilience (Gibson & Tarrant, 2010).

Organisational models of resilience are also important to consider from an individual and organisational perspective (Cornum, Matthews & Seligman, 2011). The *Principles Model of Resilience* consists of six common themes of resilience (Gibson & Tarrant, 2010). Gibson and Tarrant suggest that the following six basic principles of resilience are applicable to organisations and individuals alike: 1) *Resilience is an outcome*, 2) *Resilience is not a static trait*, 3) *Resilience is not a single trait*, 4) *Resilience is multidimensional*, 5) *Resilience exists over a range of conditions*, and 6) *Resilience is founded upon good risk management*.

1) *Resilience as an outcome* suggests that resilience is not a process, management system, strategy or predictive measurement, but is a trait that can be observable in response to a substantial change in circumstances. In other words, this principle suggests that resilience is the outcome of a completed process and not something that occurs as part of a process.

2) *Resilience is not a static trait* suggests that there is no fixed feature or score that determines when you have reached a constant state of resilience. Instead, resilience is fluid and changes in response to the volatility of external environmental factors over time. This principle states that resilience has the capacity to increase or decrease dynamically, as the context changes.

3) *Resilience is not a single trait* suggests that there are many, complex, influential variables that must be considered, not only one single contributing variable. As circumstances change, the presence, importance and contribution of each resilience variable can also change.

4) *Resilience as multidimensional* suggests that no single model can describe or capture the concept of resilience in its entirety. Neither is there any single model that can account for all factors that contribute to the resilience of an individual or an organisation.

5) *Resilience existing over a range of conditions* suggests that an individual (or organisation) can display high levels of resilience in one stressful situation and low levels of resilience in another. In other words, a spectrum of resilience levels can be observed from the same individuals or organisation at different times, places and circumstances. If an organisation or individual is able to practice and focus on developing resilience, their resilience is likely to increase over time.

6) *Resilience is founded upon good risk management* suggests that the development of resilience is rarely accidental. As individuals and organisations effectively communicate and demonstrate sound resilience assessment, monitoring, and treatment practices, resilience is likely to increase and the risk of negative outcomes from traumatic events is likely to decrease.

These six principles of resilience identified by Gibson and Tarrant (2010) provide the foundation for their *Principle Model of Resilience* Model (Figure 2.4):

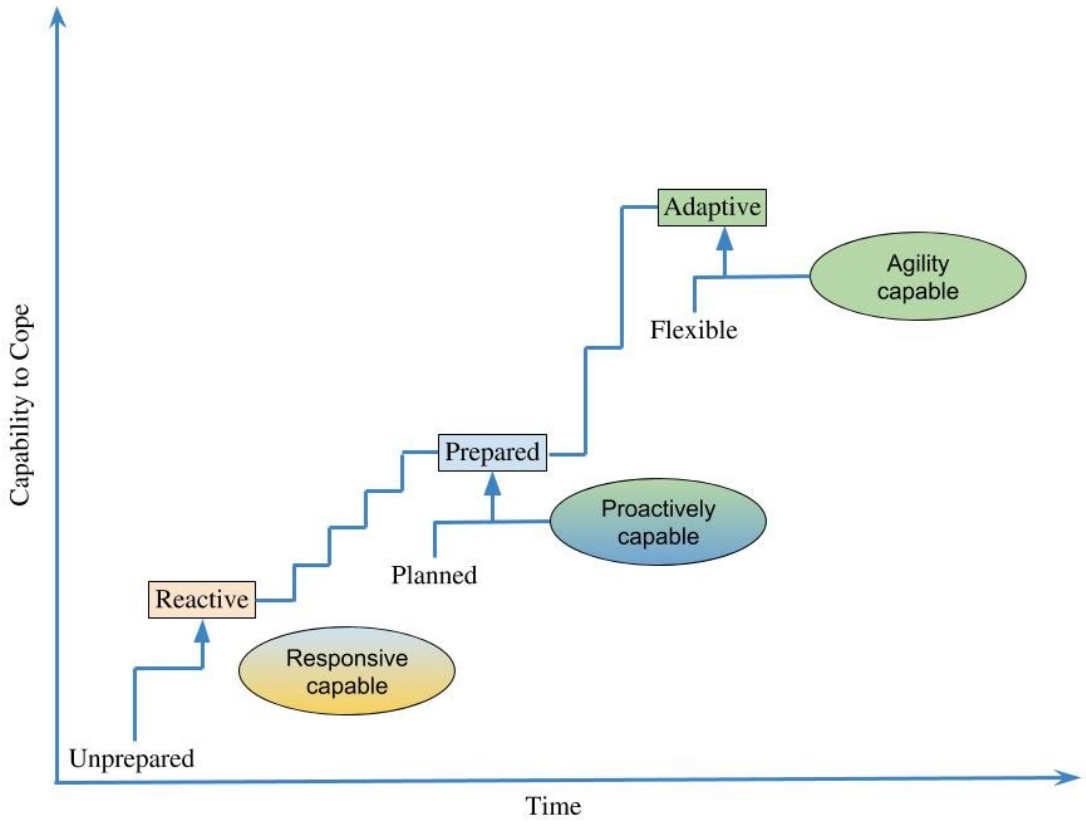

Figure 2.4. The *Principle Model of Resilience* (Gibson & Tarrant, 2010) demonstrates how an increased capability to cope over time leads to an increased ability to effectively adapt to stress. Gibson, C. A., & Tarrant, M. (2010). A conceptual model approach to organisational resilience. *The Australian Journal of Emergency Management, 25*(2), p. 9.

Gibson and Tarrant's model (Figure 2.4) shows how being 'unprepared' leads to reactive responses. Gibson and Tarrant suggest that if individuals and organisations strategically 'plan' for future events, they are better 'prepared' and more capable to respond to stressors in effective ways, which can result in 'proactive capability.' This model suggests that with the effective management of each traumatic event, individuals and organisations become more 'flexible' and can more effectively 'adapt' to the different challenges that each incident presents, creating 'agility capability.'

Becoming ‘agility capable’ means that a resilience process is routinely established, which helps alleviate emotional and psychological distress for individuals, management, and the organisation on a day-to-day basis. Being ‘agility capable’ can help organisations avoid unmanageable stress levels, trepidation and unpredictability about an outcome each time an unexpected traumatic incident occurs (Gibson & Tarrant, 2010). According to Gibson and Tarrant, the *Principles Model of Resilience* outlines some fundamental concepts of resilience. Other conceptual models from an organisational perspective, such as the *Herringbone Model of Resilience* (Gibson & Tarrant, 2010), can also apply to both organisations and individuals.

2.2.2.2 Herringbone Model of Resilience (Gibson & Tarrant, 2010).

The *Herringbone Model of Resilience* (Gibson & Tarrant, 2010) consists of five resilience characteristics: 1) *Acuity*, 2) *Ambiguity Tolerance*, 3) *Creativity and Agility*, 4) *Stress Coping*, and 5) *Learnability*.

1) *Acuity* is the ability to recognise emotional priorities and simultaneously be aware of one’s own feelings and thoughts during a traumatic incident. *Acuity* is to be cognisant of past traumatic experiences and recall previous trauma management strategies, whilst being aware of what is happening during the incident, then using all this information to clearly understand the implications for the future. *Acuity* enables an individual to consider all conscious information and accurately identify precursors of dramatic change, which help provide a better understanding of possible options for addressing the event (Gibson & Tarrant, 2010). For paramedics, the development of acuity in this way could potentially help them self assess the impact of a traumatic event in ‘real time’ (or soon after).

2) *Ambiguity Tolerance* means to continue making decisions and taking action at times of high uncertainty, instead of waiting for cognitive and emotional clarity before making decisions. For paramedics, *ambiguity tolerance* could potentially cloud their decision making process and contribute to increased vulnerability for themselves, their colleagues and their patients.

3) *Creativity and Agility* means operating in innovative ways and working around problems at a speed that matches the stressful situation. For paramedics, *creativity and agility* could help them effectively adapt with creative resourcefulness when presented with a difficulty, instead of allowing a traumatic event to emotionally overwhelm them.

4) *Stress Coping* relates to the ability of people, processes and infrastructure, to continue operating under increasing demands and uncertainty. For paramedics, *stress coping* could help enable them to effectively and efficiently recover from each subsequent traumatic event throughout their career.

5) *Learnability* is when individuals and organisations use past experiences and lessons learnt to more effectively manage trauma impact. This could apply to paramedics if organisations and their paramedics drew upon past lessons learned in positive trauma management to benefit their present work, and avoid re-experiencing negative effects from past trauma that undermines performance.

The *Principles Model of Resilience* and the *Herringbone Model of Resilience* are important conceptual models to understand because they both identify individual and organisational concepts that have relevance to the current paramedic study. To optimise the chance of a resilient outcome for those affected by trauma, both individuals and organisations must be engaged in proactive, premeditated and purposeful resilience development for their employees (Gibson & Tarrant, 2010). Gibson and Tarrant suggest that when organisations actively develop resilience strategies, it facilitates a secure psychological environment for employees and helps them feel reassured by the knowledge that support systems are already in place. Organisations that are not resilience trained are typically reactive to traumatic incidents due to a lack of clear policies, procedures or infrastructure to effectively support trauma affected employees (Gibson & Tarrant, 2010). These individual and organisational conceptual models helped shape the research questions, identify relevant interview questions, and helped develop a proposed model for the trauma management, resilience, and career longevity of veteran paramedics. Table 2.1 provides an overview of the link between research question 1, associated theoretical constructs and the interview questions:

Table 2.1

Link Between Research Question 1, Theory and Interview Question

Relevant Theory/Model	Relevant Interview Questions
Research Q1. What is the veteran paramedics' experience managing trauma?	
O'Leary and Ickovics Resiliency Model (2002)	What difficulties have you experienced working as a paramedic?
Principles Model of Resilience (Gibson & Tarrant, 2010)	How has working as a paramedic influenced you in your life?
Metatheory of Resilience and Resiliency (Richardson, 2002)	Do you think the way you manage working with trauma has changed throughout your career? (Expound)
Constructivist Self-Development Theory (Saakvitne et al., 1998)	What recommendations would you suggest to help students manage the trauma they will be exposed to throughout their paramedic career?
The Posttraumatic Growth Model (Tedeschi & Calhoun, 2004)	
Herringbone Model of Resilience (Gibson & Tarrant, 2010)	What can organisations do to provide additional support for paramedics?

Note. Table 2.1 identifies which resilience models and theories relate to research question 1 and the interview questions asked of all participants.

Table 2.2 provides an overview of the link between research question 2, associated theoretical constructs and the interview questions:

Table 2.2

Link Between Research Question 2, Theory and Interview Question

Relevant Theory/Model	Relevant Interview Questions
Research Q2. What variables contribute to the career longevity of veteran paramedics?	
Principles Model of Resilience (Gibson & Tarrant, 2010)	How has working as a paramedic influenced you in your life?
Herringbone Model of Resilience (Gibson & Tarrant, 2010)	What difficulties have you experienced working as a paramedic?
Metatheory of Resilience and Resiliency (Richardson, 2002)	Do you think the way you manage working with trauma has changed throughout your career? (Expound)
Constructivist Self-Development Theory (Saakvitne et al., 1998)	What recommendations would you suggest to help students manage the trauma they will be exposed to throughout their paramedic career?
	What can organisations do to provide additional support for paramedics?

Note. Table 2.2 identifies which resilience models and theories relate to research question 2 and the interview questions asked of all participants.

As Table 2.1 and 2.2 demonstrate, relevant individual and organisational resilience theories and models were associated with both, the relevant interview questions and each applicable research question. This helped establish an empirically grounded foundation on which the interview and research questions could be based. By identifying the relationship between individual and organisational resilience theory, interview questions and the research

questions, the researcher gained additional insight and consideration to the researcher, which helped provide an overall picture of resilience variables that could help know appropriate probing questions to ask during the interview process. When employees are individually and collectively resilient within an organisation, this facilitates a healthy, resilient, culture and can strengthen both employees and the organisation as a whole (Gibson & Tarrant, 2010). When applied to paramedics, the aforementioned individual and organisational conceptual models and theories could be adapted and refined to help stakeholders understand what kind of resilience variables could help mitigate the difficulties that paramedics experience. These theoretical models were briefly discussed to help provide a basic understanding and to provide some context for the reader about the existing resilience literature and their relevance to the current study.

2.3 Police Services

Police are often the first on the scene of a PTE such as motor vehicle accidents, homicide, violent crimes, natural disasters, and terrorist activities. All of these circumstances can have a negative physical, emotional and psychological impact on the well-being of police personnel (Anderson & Papazoglou, 2014). In an attempt to help mitigate the impact from these events,studies have been conducted for the benefit of the individual police officer, the benefit of their family, policing organisations, and members of the community. The challenges that police experience suggest that they require much needed help and support to help fulfill their responsibilities to the community. Due to the frequent exposure to trauma that police officers experience, the following studies demonstrate the extensive research that has been conducted to help develop trauma education, trauma management training, and resilience training programs (Papazoglou & Tuttle, 2018).

Similar to paramedics, police officers are exposed to a range of PTE situations such as domestic violence, motor vehicle fatalities, murder, homicide, and suicide (Paton, 2006). Trauma studies have been conducted among police in an effort to help mitigate the trauma impact and help increase their resilience to work-related trauma. Quantitative and qualitative studies have investigated the health consequences of stress and trauma in police officers (Violanti, 2013; Pavšič Mrevlje, 2018), coping strategies used by police after exposure to trauma (Menard & Arter, 2013), and symptoms of depression and Post Traumatic Stress Disorder among police (McCanlies, Sarkisian, Andrew, Burchfiel & Violanti, 2014).

Studies have led to the development of stress management training programs for special forces police officers (Anderson et al., 2015), trauma and loss management training for police cadets (Manzella & Papazoglou, 2014) and trauma resilience training for police (Arnetz, Nevedal, Lumley, Backman & Lublin, 2009). A global study on the implications of trauma on police officers and police cadets (Colwell, Lyons & Garner, 2012) suggested that positive correlations of trauma management existed between police officers who believed situations to be predictable and controllable and officers who were accepting of unpredictability and uncontrollable situations. Colwell and associates found that maintaining positive attitudes and views of the world throughout their career contributed to police officers' ability to effectively manage trauma. Recommendations were made for therapeutic adaptation for officers' individual beliefs and schemas to be considered in order to tailor treatment approaches and effectively mitigate the effects of trauma impact. The current study found similarities with Colwell's study, which will be discussed later, but it would be interesting to investigate if such adaptations and accommodations made to help mitigate police trauma impact could be made for veteran paramedics to help them manage the PTE's they are exposed to.

Another police study investigated the relationship between the emotional responses of police officers and the predictability of their trauma resilience (Galatzer-Levy et al., 2013). The extensive number of trauma related studies conducted among police officers has contributed to the development of resilience training programs for police officers (Forbes & Fikretoglu, 2018). In many countries, the culture within the police profession includes feelings of comradery (Woody, 2005) and a 'sense of community' (Woody, 2005; Edwards, Haynes, Palmer & Murphy, 2018; Woody, 2005). It has also been found that numerous individuals in the police force have worked for decades until they reach retirement age without experiencing burnout from exposure to traumatic events (Cameron & Griffiths, 2017; Government Accountability Office, 2012). When compared with police personnel, the attrition rate of paramedics is much higher and the average working career is much shorter (Brough, 2005). Another police study (Rubiano, Sanchez, Guyette, Puyana, 2010) explored a resilience training course for German Federal Police in an effort to help mitigate the negative impact of trauma they experienced. German Federal Police delivered a series of training programs to their police officers which included psycho-education, mindfulness, emotional intelligence, journaling exercises, and debriefing with colleagues.

Results of these police studies suggested that these training programs were influential in helping police officers effectively manage stress and trauma situations. The extensive resilience research conducted with police has greatly contributed to the increased resilience among police officers to the extent that they have been able to identify predictive markers (Burke & Shakespeare-Finch, 2011) and trajectories of resilience in police officers (Galatzer-Levy et al., 2013). These police studies outlined above lead to questions of relevance for paramedics about the different attrition rates and career longevity between police and paramedics and whether or not the average police officer is more resilient than the average paramedic. Examples include investigating whether or not police receive better trauma management training than paramedics in preparation for working with PTEs. Without specific research in this area, it is difficult to know whether or not the higher frequency of trauma calls alone can account for the higher attrition rates among paramedics compared to the number of trauma calls police receive and their attrition rates. It could also be beneficial to investigate whether or not the trauma education, trauma training, and resilience training programs that police receive, contribute to the differences in career longevity between police and paramedics or if police organisations are providing better trauma support for their employees than paramedic organisations.

Over time, studies conducted among police have contributed to the introduction of resilience training programs, to help better prepare them to manage work-related trauma (Weltman, Lamon, Freedy & Chartrand, 2014). The progress from years of resilience research and resilience training programs in the police profession (Forbes & Fikretoglu, 2018; Papazoglou & Anderson, 2014), has become such a focus that a new specialty field of psychology has been created, called 'Police and Public Safety Psychology' (Brewster et al., 2016). Research has been conducted to examine the validity and reliability of specific stress measurement questionnaires for police (McCreary & Thomson, 2006) and has examined the effects of police suicide prevention programs (Mishara & Martin, 2012). Studies in personality traits that influence police behaviour (Tarescavage et al., 2014) have been explored to help identify predictable resilience markers in new police recruits (Burke & Shakespeare-Finch, 2011). Some police studies, relevant to the current paramedic study, investigated PTSD (Verbeek & Van der Velden, 2016), post traumatic growth (Chopko, Palmieri & Adams, 2018), and resilience among retired police officers (Pole, Kulkarni, Bernstein & Kaufmann, 2006).

The aim of the Chopko and associates study was to test a model that proposed a connection between the type of trauma a police officer was exposed to, the symptoms of PTSD they experienced, and PTG. Investigative reports suggested that police officers were becoming traumatised from the difficult jobs they attended and Chopko wanted to understand which variables contributed to the PTG they experienced. Chopko and associates explored the differences between what they called cognitive PTG (the self-aware, introspective process) and behavioural PTG (the self-aware behavioural changes they made) as a part of the personal growth and development process. Results suggested that PTG was more prevalent when the safety of police officers was threatened (direct impact), than when a police officer was managing a threatening situation that compromised another person (indirect impact). Results suggested that relationship stress in their personal life directly contributed to the PTSD symptoms they experienced but was not influenced by direct or indirect threats to personal safety, despite their frequent exposure to threatening situations. Chopko and associates concluded that the type of trauma a police officer was exposed to (direct or indirect), greatly influenced the extent of their PTG. Furthermore, Chopko found that police behaviour was more positive when they consciously chose to avoid any thoughts about a traumatic event, instead of focusing on how they felt and trying to consciously work through the negative impact from it.

The PTG and associated characteristics among police officers was vital to the development of resilience training programs because it helped organisations know how to provide the necessary support police needed to become more resilient to trauma impact (Chopko, Palmieri & Adams, 2018). Resilience research conducted among retired police officers also provides valuable insight into their career longevity and how they effectively manage work-related trauma throughout their career (Pole, Kulkarni, Bernstein & Kaufmann, 2006). Pole and associates surveyed retired police officers who had been exposed to extensive trauma throughout their career. Surveys collected demographic information, personality attributes, exposure to trauma, coping strategies, non-trauma related work stress, post traumatic growth, physical health, mental health, and interpersonal functioning. The three areas of physical health, mental health, and interpersonal relationships were investigated and their influence on resilience. Results revealed that the most important coping strategies, which contributed to the resilience of retired officers, was sharing the experiences (debriefing) of work-related challenges with family and friends.

Results also found that social avoidance strategies, such as avoiding spending time with friends and family, initially helped participants avoid discussions about the trauma impact, but in the long term greatly undermined police officer resilience and their effective management of trauma. Pole and associates suggested that by integrating a high frequency of social interaction into their daily work life police could become more resilient and less affected by the work-related trauma they experienced. From studies such as these, resilience training programs have been developed and contributed to the effective trauma management and overall well-being of police officers (Forbes & Fikretoglu, 2018). It is unknown if results from the above police resilience studies, and associated coping strategies used among police, are applicable to paramedics. While these studies may provide potential insights which could be applicable to paramedics, a search among the available literature could not identify empirical evidence supporting the transferability of similar coping strategies from police to paramedics. As such, the applicability of findings among the above police studies in resilience training and that of paramedics is not known but further investigation in these areas could be beneficial and provide greater insight into more effective trauma management for paramedics.

2.4 Military Personnel

Another group who are greatly affected by trauma are military personnel in the defense forces, especially during times of war (Kelly et al., 2008; Lee, Sudom & Zamorski, 2013). Due to the wide-spread impact of trauma on military personnel throughout the world, many studies have been conducted in an effort to mitigate its effects (Xue et al., 2015; Wang et al., 2018). Studies suggest that combat exposure is one of the primary contributing factors to symptoms of PTSD, depression, anxiety, and other mental health difficulties in military personnel returning home from combat (Barr, Kintzel, Sullivan & Castro, 2018; Clancy et al., 2006). Studies that included public perceptions of PTSD suggest that symptoms and a diagnosis of PTSD were primarily reserved for combat veterans during times of war and not applicable to civilians (Mittal et al., 2013; Williams & Berenbaum, 2019). The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) APA, 2000) clarifies this misconception with the first diagnostic criteria being — any actual or perceived threat to one's own, or another individuals personal safety.

Diagnostic criteria from the DSM-IV-TR (2000) were used in the current study instead of the more recently published DSM-5 (2013) due to criticisms of reliability and validity among the psychological community with the DSM-5, especially in the areas associated with trauma and PTSD (Young, 2013; Chmielewski, Clark, Bagby & Watson, 2015). A primary example of PTSD criterion according to the DSM-IV-TR (2000) is experiencing a perceived threat to an individual's safety by observing a nearby car accident, being victim to a home burglary or witnessing another person being abused in some way (Mittal et al., 2013). For both, military personnel and paramedics alike, the threat to their own, and others' personal safety could happen on a daily basis. To help mitigate the frequency of these experiences for military personnel, studies have been conducted over recent decades which have greatly contributed to the support provided to military personnel in the armed forces more recently (Adler, Williams, McGurk, Moss & Bliese, 2015; Paul, 2015). Veterans of active combat can be exposed to extreme trauma on a daily basis. Understandably, the constancy of intense trauma exposure can create internal emotional conflict and incongruence between their beliefs and the trauma to which they are being exposed (White, Ellison, DeAngelis, Sunil & Xu, 2018). The trauma impact from war-related experiences has been debilitating for millions of veterans who have served in wars throughout the world (Barr et al., 2018).

As with police officers, many studies have been conducted with military personnel to help mitigate the impact from the trauma they experience from combat (Adler, Williams, McGurk, Moss & Bliese, 2015). Examples include: research to promote resilience in military veterans (Salzman, Bartoletti, Lester & Beardslee, 2014); exploring neurobehavioral differences in individual resilience (Lin et al., 2015); using cortisol concentration levels in hair to predict symptoms of PTSD (Steudte-Schmiedgen et al., 2015), enhancing resilience through omega-3 fatty acids (Deuster, 2014), investigating correlations between personality attributes and resilience (Zimmerman et al., 2014), trauma from sexual abuse within the military (Monteith, Gerber, Brownstone, Soberay & Bahraini, 2019), combat trauma (Howard, Stockinger, Cap, Bailey & Gross, 2017), trauma treatment for combat military dogs (Orman, Parker, Stockinger & Nemelka, 2018), resilience training programs for cadets (Crane et al., 2019), personality predictors of resilience (John, Oliva, Buckwalter, Kwok & Rizzo, 2014), trauma among the children of soldiers (Veronese, Pepe, Jaradah, Al Muranak & Hamdouna, 2017), and suicide among military personnel (Bryan, Sinclair, & Heron, 2016).

Among the numerous military studies, one particular military study explored the role of cognitive functioning among PTSD affected soldiers (Holliday, Williams, Bird, Mullen & Suris, 2015). Holliday and associates investigated the trauma impact on soldiers exhibiting PTSD symptomology, and examined implications on psychosocial functioning, mental health, and quality of life. Evidence-based treatments of psychotherapy in Cognitive Processing Therapy (CPT) and Present Centered Therapy (PCT) were administered to different groups with a six month follow up. Results found the CPT group reported significantly higher levels of overall functioning than the PCT group, suggesting that improving cognitive processing contributes to the overall functioning of military personnel affected by symptoms of PTSD. Holliday and associates suggest that PTSD symptoms interfere with cognition, psychosocial functioning, and quality of life for soldiers. Such impairment suggests that soldiers' functional capacity to perform their duties could be compromised, thereby also affecting soldiers around them. Other past studies also support the notion that trauma impact can affect one's functional capacity, especially within the medical industry (Beaton & Murphy, 1993; Stetson, 1997). Studies suggest that the quality of patient care can become compromised when health care providers experience high levels of stress (Beaton & Murphy, 1993; Stetson, 1997).

If this compromised state applies to paramedics who are cognitively compromised by PTSD in the same way soldiers are, then their ability to function in their daily life could also be compromised. In addition, the effective life saving treatment they provide to patients in need of emergency medical care could also be very limited if paramedis are compromised by symptoms of PTSD. Similarities of compromised functioning between military personnel and paramedics may not be similar but if they do exist, then there could be much to learn from the above military studies in relation to effective trauma management for paramedics. Another relevant military study associated with the current paramedic study explored predictors of Post Traumatic Growth (PTG) and associated variables that contributed to trauma resilience (Russano, Strauss, Sullivan, Gobin & Allard, 2017). Military veterans receiving treatment for trauma completed pre- and post-treatment assessments, measuring sociodemographic characteristics, religiosity, and PTG. Results suggested that high levels of religious beliefs during the pre-treatment process were significantly and positively correlated with high levels of post-treatment PTG.

Personality among military personnel was also identified as a contributing factor to resilience (John, Oliva, Buckwalter, Kwok & Rizzo, 2014; Zimmerman et al., 2014). Kahler's Process Communication Model (Kahler, 1982) suggests that individuals with strong personality characteristics in traditional values, ethics, morals and beliefs, such as honesty and integrity in business affairs, or dedication and conviction to a cause they strongly believe in, are called *persister* personality types. According to Kahler (1982), such personality characteristics can be naturally drawn to specific professions which help fulfill their dedication and commitment to their beliefs. Examples of *persister* dominant professions include the police service, religious service, firefighters, nurses, military personnel and paramedics.

Kahler (1982) suggests that professions such as these are driven by the commitment and dedication to the betterment of society, saving lives, and loyalty to protecting one's country. People with these personality attributes may appear to naturally have an internal built 'drive' to persevere through difficulties until a desired goal is achieved. Other studies support this notion suggesting that persistence through difficulties is, in part, due to one's personality attributes (Holman, Pascal, Hojbotă, Bostan & Constantin, 2019; Satchell, Hoskins, Corr & Moore, 2017). Even among military personnel, personality related characteristics of coping and resilience can be found (Meško, Karpljuk, Videmšek, Podbregar & Psihološka, 2009). Some studies, relevant to the current study, investigated seasoned veterans in their field and resilience among retired military personnel (Isaacs et al., 2017; Taylor, Urena, Carr & Min, 2018). One particular military study investigated resilience among retired veterans (Isaacs et al., 2017). A nationally represented sample of 2157 USA military veterans completed internet based surveys to measure symptoms of PTSD, major depression, and generalised anxiety disorder from past exposure to trauma (Isaacs et al., 2017). Of the three groups identified, it was found that the first, or 'Control Group' exhibited low exposure to trauma and low-level current distress. The second group was identified as the 'Resilient Group' who experienced high-level trauma exposure throughout their lifetime but exhibited low-level current distress. The third, or 'Distressed Group,' consisted of participants who had high-level trauma exposure and a high level of current stress.

Results of Isaacs and associates study (2017) suggested that the large majority of veterans in the participant sample demonstrated high levels of psychological resilience. Comparisons between the 'Distressed Group' and 'Resilient Group' found the resilient group tended to be younger in age and had lower incidence of physical health problems, past psychiatric history, and drug use. Results also suggested that higher levels of emotional stability, extraversion, dispositional gratitude, purpose in life, and altruism were found in the 'Resilient Group,' who also scored low in 'Openness' to new experiences. These 'Resilient Group' characteristics were deemed as predictive variables that contributed to military veteran resilience. Isaacs and associates proposed that future prevention and treatment efforts should focus on developing gratitude, sense of purpose, and altruism, to help mitigate trauma impact and foster resilience in military personnel exposed to high levels of trauma. It is interesting to note that 'soft skills' like gratitude, sense of purpose and altruism were identified as resilient predictors associated with personality attributes, rather than functional coping strategies, such as exercise or distraction strategies. The results from Isaacs and associates study (2017) suggest that soldiers exposed to high levels of trauma can be resilient, or can develop resilience, and that a strong connection exists between personality attributes and resilience in veteran military personnel. Finally, it is important to note that resilience training programs have been so beneficial in mitigating trauma impact for military personnel that these programs have been adapted to help Iraq-Afghanistan war veterans reintegrate back into society (Sreenivasan, Rosenthal, Smee, Wilson & McGruire, 2018). It is unknown if these personality characteristics favouring resilience among military personnel could apply to paramedics but if such a benefit could be transferable in terms of program principles, it may bode well for helping address trauma in paramedics.

2.5 Emergency Medical Services Personnel

Within emergency services, much research has been conducted to explore the trauma impact, trauma management, and resilience among firefighters (Lee, Ahn, Jeong, Chae & Choi, 2014), nurses (Hart, Brannan & De Chesnay, 2014), and doctors (Stevenson, Phillips & Anderson, 2011). For the majority of these professions, the basis of the work they perform is primarily in situations involving trauma. As such, it could be valuable to investigate research conducted in these professions to determine whether or not trauma impact, trauma management and resilience findings could be applicable to paramedics.

2.5.1 Resilience and firefighters.

Firefighters were included as emergency services personnel because they are also trained to provide emergency first aid and some degree of in-field medical treatment (Komarovskaya et al., 2014). A very modest number of studies investigated firefighter resilience, or the management of trauma among firefighters. These studies include the use of functional Magnetic Resonance Imaging (fMRI) to investigate the relationship between emotional experience and resilience (Reynaud et al., 2103), resilience and health promotion among firefighters (Blaney & Brunsden, 2015), and personality and stress resilience in fire fighters (Morales, Box, & Petruzzello, 2018). In some parts of the world firefighters are trained to be paramedics and vice versa (Murphy, Beaton, Pike & Cain, 1994). While firefighters can be exposed to trauma on a regular basis, research suggests that the frequency of trauma exposure is much lower than paramedics (Regehr, Hill, Goldberg & Hughes, 2003). Doctors are another medical profession where resilience studies appear to have been conducted.

2.5.2 Resilience and doctors.

Resilience studies have been conducted among hospital based doctors (Martin, 2007) and general practice doctors (Cowling, Majeed & Harris, 2018). In the area of trauma, studies have been conducted; with resilience and doctors working in challenging countries around the world (Stevenson, Phillips & Anderson, 2011), with trauma in professional medicine (Timmermans, 2008), in trauma among medical students (Dhingra, Tewari & Li, 2015), with trauma and personality traits among doctors (Eley et al, 2013), with trauma impact and burnout among doctors (Sime, Quick, Saleh, & Martin, 2007). As the above studies demonstrate, there are numerous and a diverse range of studies that have been conducted among medical doctors. Among the different types of medical doctors, emergency room (ER) doctors have a similar high frequency of exposure to trauma as paramedics because they treat the same patients that paramedics deliver to hospital (Somville, De Gucht, & Maes, 2016). Based on the very high exposure to trauma, it appears reasonable that a substantial literature of trauma resilience would exist to help doctors effectively manage trauma impact. Perhaps paramedics could benefit from the existing resilience literature among medical doctors to help address the difficulties that paramedics experience. Another medical profession exposed to trauma is nursing.

2.5.3 Resilience and nurses.

There has also been much research conducted in the area of trauma impact and resilience among nurses (Abelsson, Lindwall, Suserud & Rystedt, 2018; Allen & Palk, 2018; Thassanee, Yajai, Orapan, & Chukiat, 2018), covering topics such as; burnout (Hylton, Batcheller, Schroeder & Donohue, 2015), stress and job satisfaction (Munnangi, Dupiton, Boutin & Angus, 2018), vicarious trauma (Garner, 2017), outcome analysis in trauma care (Holliday, Samanta, Budinger, Hardway & Bethea, 2017), perceived competencies of ambulance nurses (Abelsson et al., 2018), PTSD among trauma nurses (Schwarz, 2005), psychiatric impact of trauma (Alexander & Atcheson, 1998), resilience enhancement strategies for nurses (Chesak et al., 2015), PTSD symptoms in Intensive Care Unit (ICU) nurses (Mealer, Jones & Meek, 2017), and the resilience of nurses during natural disasters (Turner, 2015). A few nursing studies stand out as being relevant to the current paramedic study (Allen & Palk, 2018; Shin, Kim & Ji, 2018).

The first study investigated the resilience of nurses within a hospital setting (Shin, Kim & Ji, 2018). Data from nurses was collected to help identify how nurses coped with working in stressful hospital settings. A combination of qualitative and quantitative methodologies were used to gather data from nurses. Shin, Kim and Ji suggested there to be four different types of resilience that helped nurses cope with trauma in hospital settings: 'Reality-Harmonic,' 'Own Will,' 'Professionalism-Oriented,' and 'Relation-Oriented.' These four types of resilience responses were identified among nurses as helping them cope with work-related trauma. The type of resilience identified was largely contingent upon individual perception and their respective beliefs, which varied from one person to the next.

'Reality-Harmonic resilience' was defined by Shin, Kim and Ji (2018) as, nurses who did not rely on others or on their external environment to help mitigate their work-related stress. Nurses who coped using the 'Reality Harmonic' style could not overcome their challenges with their own willpower so used realistic coping strategies which focused on immersing themselves in their work, taking time off work to recover, and managing their workload. 'Own Will' resilience was defined as nurses who were willing to push through the work related stress and enhance their self-esteem by managing their mental health through willpower. Nurses who applied the 'Own Will' approach separated their work time from their personal time to help them cope.

'Professionalism-Oriented' resilience was defined as, nurses who experienced a sense of accomplishment from their work and used the recognition they received as a reward from family and patients to help them manage their difficulties. 'Relation-Oriented' resilience was described as nurses who took pride in being a nurse and managed their work stress through cooperation and mutual support of relationships with their coworkers to help improve work efficiency. The second study, conducted by Allen and Palk (2018), was also very relevant to the current veteran paramedics study. Allen and Palk first explored the negative and positive experiences coping strategies that nurses employed to effectively manage work-related trauma in hospital emergency rooms (E.R.; Allen & Palk, 2018). Building upon their 2017 study, Allen and Palk explored the experience of E.R. nurses exposed to trauma, with a view to develop strategies and guidelines which could help strengthen resilience among emergency room nurses. In Allen and Palk's 2018 study, a qualitative methodology was adopted to help gain an understanding about the personal experiences and perceptions of trauma nurses, and the types of traumatic events that were emotionally and psychologically confronting. Allen and Palk (2018) explored how such events affected participants and what nurses believed was needed to help mitigate the trauma impact they observed in others and experienced themselves. Allen and Palk found that patient death was a common high level stressor for the majority of nurses, especially when a patient's death was unexpected.

Infant and child deaths were also among the most traumatic situations that E.R. nurses experienced. Results from Allen and Palks (2018) study found that nurses experienced secondary trauma from observing the grieving family members of patients who had died. Allen and Palk also found that workplace incidents were also responsible for the trauma that nurses experienced. For example, violence in the workplace perpetuated by patients or by the family members of patients, was very traumatic, as was treating patients who had self-harmed or attempted suicide. Another traumatic situation that affected nurses was witnessing extreme trauma where patients' bodies had been mutilated in some way and many of the nurses could still vividly recall what they had seen, many years later. Among the most traumatic experiences recalled by nurses was when they could relate on a personal level, to their own life, such as caring for an injured child who was the same age as their own child (Roach & Medina, 1994). As with nurses, past paramedic studies identified similar challenges associated with children (Straud, Henderson, Vega, Black, & Van Hasselt, 2018).

As the numerous examples above demonstrate, much literature exists among high-risk professions in an effort to help mitigate the negative impact from work-related trauma, but comparatively few studies have been conducted among veteran paramedics, even though paramedics are generally have more exposure to trauma (Regehr, Goldberg & Hughs, 2002). While the number of research studies with veteran paramedics has been relatively low (Krochmal et al., 1995; Spivak, 1997) in comparison to nurses, the recent attention to paramedic well-being appears to be contributing to the increasing number of paramedic studies (Gayton & Lovell, 2012; Jones, Holmes, Brightwell & Cohen, 2017). . The current paramedic study was conducted to contribute to the existing literature but most importantly to help address gaps in the literature about veteran paramedics.

2.5.4 Emergency medical services (EMS) research among paramedics

EMS studies investigating the impact of paramedic work on the well-being of individuals is very relevant to the current study. A 2014 study among paramedics in Australia explored fatigue and what paramedics believed to be contributing factors that impeded upon their work performance capacity (Paterson, Sofianopoulos, Williams, 2014). Paramedics completed a survey on perceived causes of performance-impairing fatigue and data were analysed using qualitative methods of coding, categorisation and theme identification. Results identified six fatigue related themes which influenced participant performance and the quality of medical treatment they provided to patients.

The six themes identified by Paterson, Sofianopoulos and Williams, (2014) were; working time, sleep, workload, health and well-being, work-life balance, and environment. Paterson and associates identified the main contributing factors to participant fatigue were how much sleep they had acquired prior to their work shift; how long they were awake during the shift; the time of the day they worked ; and what tasks participants were asked to undertake during their shift. Results also identified that paramedics defined contributing factors of fatigue in practical terms such as the length of a shift and the associated workload. Paterson and associates study found that paramedics in the study had a broad understanding of what fatigue was and that this should be taken into consideration when discussing and implementing fatigue management strategies with paramedics. These recommendations were made to help improve paramedic awareness and help educate them about the full extent of fatigue impact, including emotional and cognitive implications.

Recommendations included fatigue education programs or wellness programmes to help minimise the risk of fatigue impact for both paramedics and the patients they provide medical treatment to. The relevance of Paterson and associates 2014 study to the current study is that participant awareness of how paramedic work affects them and how they manage this, is important for both paramedics' well-being and patient care. A subsequent study (Pyper & Paterson, 2016) explored fatigue further and investigated the mental health of rural paramedics in Australia. One-hundred and thirty-four paramedics participated in a mixed methods study, via a survey and interview process, to investigate their levels of stress, fatigue and emotional trauma while working in rural communities. Data were analysed using a combination of descriptive analysis and qualitative analysis of coding and categorisation. Results suggested that participants experienced high levels of fatigue and emotional trauma from working as a paramedic in rural communities, primarily due to community expectations and organisational factors related to 'office politics.'

Even though participants in Pyper and Paterson's study reported what they considered to be 'normal' levels of stress, participants reported that fatigue, stress, and emotional trauma contributed the most to an increase of drug administration errors to patients and an increased incidence of falling asleep while driving, both of which could result in lethal outcomes for both patients and paramedics. Results also suggested a complex number of risks and contributing variables to the challenges that paramedics experience working in rural communities. It is important to note from Pyper and Patersons study that the additional component of mental/emotional health of paramedics influenced their functional capacity and well-being. This has relevance to the current study because the many of the same emotional well-being factors are explored in veteran paramedics.

Another recent quantitative study investigated 'workplace belongingness' and whether or not it contributed to predictable psychological distress, general distress and contributed to resilience in ambulance officers (Shakespeare-Finch & Daley, 2017). Seven-hundred and forty Australian ambulance officers completed a battery of surveys designed to measure depression, anxiety, resilience, and sense of belonging within the organisation for which they worked. Results suggested that specific variables, such as trauma exposure and length of service, greatly contributed to reduced levels of distress and helped enhance levels of resilience. Shakespeare-Finch and Daley suggested that enhancing ambulance officer's sense of belonging in the workplace could promote the overall well-being

of emergency workers despite their exposure to ongoing potentially traumatic events (PTEs). It is interesting to note how the organisational influence of belonging and their suggestion to enhance workplace belonging to help promote overall well-being and contribute toward improving resilience in ambulance officers, because the current paramedics study comments on many similar topics.

A qualitative study in the state of Victoria, Australia investigated workers compensation claim statistics to explore Musculoskeletal (MSK) and mental health injuries among ambulance officers and paramedics and compared these factors with employees in the fields of nursing, social and welfare services, carers, and assistants in some of these respective professions (Roberts, Sim, Black & Smith, 2015). Statistical data from Workers Compensation (WC) claims were collected between July 2003 and June 2012. Results showed an upward trend in ambulance and paramedic officer WC claims for all injuries, the highest of which were in MSK and mental health injuries when compared with other professions in the study. The results suggested that ambulance officers and paramedics were at much greater risk (13 times higher) of lower back and mental health injury than nurses. Social and welfare workers were found to be the second highest at risk group for mental health injury, being threefold greater than nurses.

The Roberts and associates study concluded that differential patterns of MSK and mental health injuries existed among participating groups and suggested that future studies focus on circumstances associated with injuries and the exploration of preventative programs. The increased risk of mental health injuries to paramedics compared to other professions in the study is important as the results from Roberts and associated study (2015) not only suggest that mental health injuries are high among paramedics, but also that increased understanding is required to assist with the development of mental health programmes to better support paramedics. Similar to Roberts, Sim, Black and Smith's 2015 study, the basis of the current paramedic study presumed some degree of mental health risk for veteran paramedics from working with patient trauma and seeks to gain and improve understanding about how this cohort managed working with trauma and the PTEs they experienced. The current study hopes to make a contribution to the development of future mental health prevention programmes for ambulance officers and paramedics.

A 2017 qualitative study investigated the strengthening of resilience in paramedic students through their participation in a 6 to 8 hour online resiliency training program (Anderson, Vaughan & Mills). One-hundred and thirty-eight students participated in the study. Participants were divided into experimental and control groups, both participating in pre- and post-intervention scenarios which included measurements of self-reliance (belief in oneself); meaningfulness (purpose in life); equanimity (balance of life perspectives); perseverance through difficulty; and existential aloneness (awareness of both unique and collective experiences). Results indicated that those who participated in the online resilience training program (experimental group) yielded statistically significant differences in the above five areas of measurement compared to the control group, who did not participate in the online program. The results found that the experimental group scored higher levels of resilience than the control group, suggesting that the development of resilience skills could help mitigate and manage workplace stress and potential trauma impact. Anderson, Vaughan and Mills (2017) concluded that resilience training for paramedics and student paramedics could potentially help reduce the risk of developing trauma related mental health difficulties which could in turn help improve their overall well-being and the quality of their personal and working life. Anderson and associates recommend future research in these areas to further help prepare paramedics to work with the patient trauma they will face throughout their career. The Anderson, Vaughan and Mills 2017 research is relevant as the current study explores the experience of veteran paramedics to gather information about their experience. An increased understanding about a veteran's experience could provide helpful information to help aid in the development, or refinement, of resilience training programs. Such may also have the potential to help identify additional variables which could contribute to paramedic resilience.

2.5.5 Resilience and veteran paramedics.

Research has already identified the impact that long-term stress has on emergency workers, increasing the risk of depression, anxiety, substance abuse, sleep problems, coronary disease and suicide (Beaton, 2006; Smith & Roberts, 2003; Wieclaw, Agerbo, Mortensen & Bonde, 2006). Past and more recent studies all express concern for the well-being of paramedics which are continuing to gradually increase but not enough to compensate for increasing incidence of burnout, PTSD, and suicide also being noted (Streb, Haller &

Michael, 2014). These issues are not geographically localised but are increasing among paramedics in the United States (Smith & Roberts, 2003), Switzerland (Streb, Haller & Michael, 2014), and throughout Australia (Kirby, Shakespeare-Finch & Palk, 2011). Whilst the above studies identify some of the research conducted among paramedics, no known empirical veteran paramedic studies have been published that explore what is needed to help mitigate trauma impact, or explore existing paramedic resilience that veteran paramedics appear to exemplify.

Another paramedic study investigated students in their final year of training regarding whether or not their perceptions of peer support, negative attitudes toward emotional expression, and specific coping processes, contributed toward their psychological distress and symptoms of burnout (Porter & Johnson, 2008). Porter and Johnson's 2008 quantitative study utilised a series of pre and post-test measurements from six different questionnaires, and delivered group counselling sessions as an experimental variable to explore changes in student outcomes. Results of Porter and Johnson's study identified a number of interesting emerging trends. One significant trend identified in the study was that peer support was not found to significantly correlate with symptoms of psychological distress and burnout, suggesting that peer support was not a strong influence on these symptoms. Results of Porter and Johnson's study found that paramedics who felt personally responsible for negative patient outcomes and avoided expressing their emotions regarding traumatic events, were significantly correlated with increased levels of psychological distress. Results also suggested that participants who were aggressive in their attempts to address and resolve trauma impact were somehow able to more effectively manage their physical stress responses.

Porter and Johnson (2008) also found that 'distancing' (cognitive/emotional avoidance) and 'self control' (of emotions) were effective strategies to help increase participant resilience to work-related trauma. No significant differences in participant outcomes were found between the counselling group and the group who did not have counselling, however positive changes were found in the attitudes and perceptions of counselling group participants regarding the importance of expressing trauma-related emotions. Understanding paramedic students' final year of training in Porter and Johnson's study helped provide some valuable insights about the perceived benefits of peer support, the impact of taking personal responsibility for patient outcomes, emotional avoidance, the proactive efforts of students to address trauma impact, the strategy of emotional distancing,

and how participants controlled their emotions. Many of the findings from Porter and Johnson's (2008) study were very relevant to the current paramedic study, both in terms of contrast, and similarity. Details of these similarities and differences will be discussed in subsequent sections.

Another relevant study to the current paramedic research was a qualitative study exploring the support needs of ambulance paramedics (Porter, 2013). Porter's 2013 study investigated the psychological and social coping strategies of paramedics affected by work-related trauma and their use of peer support programs and other referral services to professionals. Results suggested that all participants were negatively affected by the trauma they worked with in some way, regardless of how long they had been working as paramedics. Porter's study found that work-related trauma negatively affected paramedics, the paramedics family, and their social functioning. Participants were found to use both helpful and dysfunctional coping strategies in their management of trauma impact. Results suggested that many participants experienced symptoms of PTSD, but were reticent about seeking help through their organisations support services due to their fear of potential repercussions if any PTSD symptomatology was diagnosed by the treating professional.

2.6 Trauma Management and Resilience Literature

There are many theories about the contributing factors of trauma management and trauma resilience (Goodman, 2017; Keenan, 2010; Overland, 2011; Salzman, 2001). Seven relevant resilience variables have been identified from existing trauma management and resilience literature, namely; Emotional Intelligence, Support Networks, Cognition, Personality Belief Systems, Past Experience with Trauma, Paramedic Training, and Organisational Support. Each of these will be briefly outlined and their relevance to the current veteran paramedic study discussed.

2.6.1 Emotional intelligence (EI).

For the purpose of the current study, Emotional Intelligence (hereafter referred to as EI) will be defined as an emotion-related, cognitive ability to perceive emotions in others, and to understand, regulate, and express one's own emotions (Mayer & Salovey, 1997). Studies in the field of EI and individual trauma management have found that many survivors of trauma have had difficulties recognising the extent of the emotional impact they experienced

from the trauma (Scher, Suvak & Resick, 2017; Sheerin et al., 2018; Simha-Alpern, 2007). Some studies suggest that traumatised individuals have even more difficulty articulating the trauma they have experienced (Simha-Alpern, 2007). Many EI and trauma studies suggest that the reason traumatised individuals have difficulty articulating trauma is because trauma is stored in an area of the brain that is not directly connected to the parts of the brain responsible for verbalisation and vocabulary (Scher, Suvak & Resick, 2017; Sheerin et al., 2018; Simha-Alpern, 2007). As the previous definition of EI states, the ability to articulate one's feelings is a large component of EI, but studies suggest that individuals who have low EI have difficulty articulating trauma, especially as the intensity of traumatic events increases (Simha-Alpern, 2007).

If low levels of EI contribute to increasing difficulty in working through trauma, one could potentially extrapolate that the development of EI might help improve the effective management of trauma. Some studies suggest this possibility to be the case (Bulathwatta, Witruk & Reschke, 2017; Espinosa & Rudenstine, 2018; Kao & Chin, 2016). Gardner, Qualter and Whitley (2011), suggest that two distinct types of EI exist, namely, Ability EI and Trait EI. Gardner and colleagues describe Ability EI as a conscious, higher-level cognitive ability that is assessed through performance measures. Trait EI refers to the lower-level, emotion related, self-perceptions associated with the personality differences that influence the EI from one person to another.

No differentiation has been made between Ability EI and Trait EI in the current study, nor has any psychometric assessment been conducted to identify, or measure, different types of EI. For these reasons, both Ability and Trait EI will collectively be assumed when considering the resilience of individuals and paramedics, unless otherwise specified (Mayer, Salovey & Caruso, 2008). The identification of two different types of EI also helps emphasise the relationship between EI and personality characteristics, which are discussed in subsequent sections. EI varies from one person to another, just as much as a person's intelligence varies between individuals (Vaillant & Davis, 2000). Many studies suggest that EI is a significant predictor of job performance and is the third most important factor to consider after personality traits and cognitive abilities have been assessed (Joseph & Newman, 2010; Law, Wong & Song, 2004; O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011).

According to EI studies, the role of EI in trauma management is very important because an individual's degree of emotional self-awareness and ability to effectively articulate these feelings, helps mitigate the personal impact of trauma (Simha-Alpern, 2007). Simha-Alpern (2007) hypothesised that training trauma survivors in EI to help articulate their experience could greatly contribute to reconciling trauma impact and help expedite their recovery from traumatic experiences. This 2007 study was conducted with survivors of the New York City World Trade Center tragedy in 2001 and investigated the EI of individuals who were diagnosed with Alexithymia. Alexithymia is defined as the inability to recognise and articulate feelings experienced (Simha-Alpern, 2007). Results from Simha-Alpern's study found that trauma victims were more capable of reconciling the trauma impact as their EI increased, by strengthening their vocabulary to help describe their traumatic experience.

Other studies are consistent with Simha-Alpern's findings and suggests that both trauma survivors and treating clinicians have experienced difficulties finding the correct words to accurately express their experienced trauma (Bromberg, 2003; Dalenberg, 2000). It has also been suggested that the inability to process trauma on a verbal level is at the very core of PTSD pathology (Van der Kolk, 1996). Van der Kolk (1996), an expert in PTSD research, suggests that the verbal information from traumatic experiences becomes inaccessible because the part of the brain responsible for verbal expression is not the same part that stores the trauma experience. For this reason, a traumatised individual can physically or emotionally react to a trauma related cue, without even being conscious of their reaction.

Van der Kolk (1996) suggests that this unconscious reaction contributes to the reason behind why some trauma survivors are unable to express themselves with words but then emotionally and physically relive, re-experience the trauma, and are subject to re-traumatisation. These special characteristics, and inability to verbally express trauma, have led experts to conjecture that normal memories and trauma related memories are encoded differently in the brain (Van der Kolk, 1996). Unlike ordinary memories, which tend to lose clarity over time, trauma related memories tend to be a combination of extreme vividness and fragmentations of the event, and result in memory gaps about important details (Monfils & Holmes, 2018). Trauma related memories have a tendency to remain fixed and unaltered or can even intensify with the passage of time (Kessler et al., 2018).

Many trauma victims reported recurring, unmodified nightmares every night over many years (Van der Kolk, 1996). Neurobiological studies have discovered much about the fragmented nature of traumatic memories, suggesting they are due to a primary failure to establish organised connections between consciousness and an individual's descriptive vocabulary of the traumatic event (Bucci, 2003; LeDoux, 1999). Other studies conducted by Van der Kolk (1996) suggest that trauma occurs when the brain is unable to simultaneously process all the trauma related information in 'real time,' as the trauma occurs, and that conscious, coherent, and integrated mental representations of traumatic events are never formed, and therefore cannot be emotionally and psychologically reconciled. Other neuropsychological studies support Van der Kolk's (1996) research, suggesting that during a traumatic event, parts of the brain responsible for creating integrated memories (the hippocampus) and the part of the brain responsible for translating experience into language (Broca's area), under-perform and are suppressed in some way. During traumatic events the part of the brain responsible for emotional regulation (the amygdala) becomes compromised by over-stimulation (Bucci, 2003; Bucci, Maskit & Murphy, 2016; Quidé et al., 2017; Grisanzio et al., 2018).

Under the perceived threat of emotional overload from the trauma, the human brain only processes the information it needs to survive and sub-symbolic memories are not connected to symbolic memories, which results in a lack of meaning and ability to articulate the traumatic event (Van der Kolk, 1996). If the trauma continues to be suppressed over long periods of time, due to an inability to give verbal expression and meaning to their traumatic experience, trauma related symptoms of PTSD and depression can become more prevalent (Cameron, 1994). The process of creating verbal pathways to facilitate the verbal expression of these unreconciled traumatic experiences is vital to the treatment and healing process (Stern, 1999). Bridging the gap in the brain between where the trauma is stored and the EI of verbal expression is suggested to be the building blocks, on which the therapeutic aims of enhancing mentalisation, 'meaning making,' and promoting integration, can be achieved (Bromberg, 2003; Fonagy & Target, 2005).

The approaches of traditional therapeutic intervention suggest that the therapeutic aims of addressing trauma are to uncover repressed information (feelings, thoughts and beliefs) about the trauma to help reconcile negative impact (Westerman, Cobham & McDermott, 2017). Some studies suggest that if the coherent mental representations of what

the trauma means were never constructed, the goal of treatment is more than merely remembering the trauma, but becomes an actual reconstruction of the traumatic event (Verhaeghe & Vanheule, 2005). The inability to find meaning about, and articulate, a traumatic event is consistent with many paramedics statements from research about their traumatic experience and not knowing what to say or how to say it (Halpern, Maunder, Schwartz & Gurevich, 2012). EI research could help illuminate training needs in this area which could potentially help paramedics better manage the trauma they experience. Results from trauma research conducted with World Trade Center survivors suggests that this could be the case (Simha-Alpern, 2007).

World Trade Center survivors were trained in EI development programs using the Emotional Intelligence Model (Chernise & Goleman, 2001; LeDoux, 1999). The EI model draws from neuropsychological research which suggests that emotional reactivity is based on neurological mechanisms. According to Chernise and Goleman (2001), emotionally driven behaviours result from problems in the underlying circuitry in the brain, which also manages the limbic area and is responsible for 'fight or flight' responses. Goleman (1996) coined the term "emotional hijacking" to describe the intense and impulsive tendency to respond without thinking when under duress. Goleman states that these reactive responses are formulated by excluding the higher cortical brain, with little reflection, judgement or planning being made, which explains why the conscious formulation of words are bypassed during a traumatic event. For people who take personal pride in their self-disciplined, regulated, and efficient way of functioning in life, these 'irrational responses can be very distressing, eliciting a perceived loss of control that usually helps them maintain self-control. For such individuals, the perceived loss of control can elicit self-blame and feelings of shame associated with disclosing the traumatic event (Bromberg, 2003).

Similarly, some paramedic studies have found that paramedics experience similar feelings of self-blame, shame, fear, or embarrassment from being affected by trauma (Regehr, Goldberg & Hughes, 2002). Other paramedic studies suggest that this shame or embarrassment contributes to explaining why some paramedics withdraw from family members and their support after being affected by trauma (Regehr, 2005). Simha-Alpern's 2007 research accepted the premise of Cherniss and Goleman (2001), which suggests that people of any age can learn to become more emotionally intelligent.

Based on the findings of Cherniss and Goleman's EI development concept, Simha-Alpern trained participants to more effectively articulate the trauma they experienced. Trainees were taught emotionally descriptive terminology and how to identify, understand and express primary and more complex emotional scenarios (Mayer & Salovey, 1997). Participants were also trained to analyse contributing factors to the trauma response and to identify behavioural manifestations of their trauma (Caruso & Wolfe, 2002). Cherniss and Goleman (2001) identified that the development of EI, sufficient to help reconcile trauma impact, was based on a 'motivation for change' and effective 'self management.' Traumatised EI trainees needed to possess an internal 'motivation for change' mechanism sufficient to develop EI and help them overcome the trauma impact. If traumatised individuals were not motivated to develop the necessary level of EI, then the reconciliation of trauma impact was considered to be less effective. 'Self-management,' was also found to greatly contribute to the long lasting efficacy of EI training suggesting that it relates to the individuals' sense that they are in charge of their own positive change and have the ability to effectively manage their own feelings, thoughts and behaviours.

Cherniss and Goleman suggested that an essential first stage of trauma intervention via EI is to determine the participants' readiness for EI training. If participants are at a pre-contemplation, or contemplation stage of doubt about any positive benefits from EI training, or question the possibility of a successful outcome, then the efficacy of their training will become compromised. Cherniss and Goleman's (2001) research suggests that participants are more likely to succeed and feel a benefit from EI training when they feel in control of their own life, rather than when they think someone or something else is in control of them. In summary, Simha-Alpern's study found that trauma symptoms were greatly reduced as participants' knowledge and skills of EI increased and continued to develop (Simha-Alpern, 2007).

Other related EI studies have investigated developmental variables of individual temperament, family environment, and childhood trauma as variables that influence EI (Gardner, Qualter & Whiteley, 2011). Some studies suggest that the development of EI strongly correlates with the emotional development of each individual during childhood (Zeidner, Matthews, Roberts & MacCann, 2003). Zeidner and colleagues (2003) created a developmental model of EI that highlights the connection between individual temperament and environmental factors as determinants of EI vulnerability.

Zeidner suggested that 'Temperament' reflects the differences in emotional reactivity and self-regulation in individuals and is strongly linked to genetic factors (Rothbart & Derryberry, 1981; Saudino, 2005). Rothbart, Ahadi and Evans (2000) also introduced a EI model which suggested that temperamental differences during childhood and adolescent development help shape the child's ability to adapt to the world around them, which is subsequently carried into adulthood (Rothbart, Ahadi & Evans, 2000). Rothbart's model identified four dimensions of adult temperament that contribute to EI, namely; Negative Affect, Extraversion/Surgency, Effortful Control, and Orienting Sensitivity.

Many of the temperament dimensions identified by Rothbart and associates are directly related to personality attributes developed by Costa and McCrae's 'Big Five' personality theory and model (Caspi, Roberts & Shiner, 2005; Costa & McCrae, 1985). Rothbart and colleagues suggest that the above four elements of temperament account for aspects of emotional reactivity and cognitive control of emotions, which in turn directly influence the expression and the regulation of emotion (Rothbart et al., 2000). Other studies investigating environmental factors of EI have yielded similar findings and suggest that the family environment and playtime with caregivers significantly contributes to the socialisation of emotional skills, especially when intertwined with explicit instruction, observation and modelling of emotional management (Zeidner et al., 2003). For example, children who grow up in environments where anger is frequently expressed, parental conflict is high, and family cohesion levels are low, tend to be more aggressive (Fang et al., 2009). Fang and associates (2009) suggest that the frequent exposure to high stress environments during childhood can undermine a child's ability to learn adaptive emotional regulation strategies. Other studies suggest that EI is greatly influenced by family environments and the perceived family cohesion, expressiveness and each individual's experience with conflict (Devi & Rayal, 2004). The current paramedic study identifies similarities with many of these EI theories and concepts, as will be discussed in subsequent sections.

2.6.2 Support networks.

Empirical evidence supports the notion that support networks help paramedics mitigate the negative effects of work-related trauma (Donnelly, Bradford, Davis, Hedges & Klingel, 2016; Pow, King, Stephenson & DeLongis, 2017). Pow and associates (2017) suggest that the benefits of support networks can be very similar to, or differ significantly

from one paramedic to the next. Support networks include individuals and groups who provide any kind of support, in any way, such as interactions with friends, acquaintances at extracurricular activities, within a peer group, social networks, work colleagues, employers, family, and extended family (Scully, 2011). Other studies suggest that paramedics use their support networks as a distraction from work-related trauma (Pow et al., 2017), or as a way to debrief after a traumatic event (Donnelly et al., 2016). One theory about why support networks help mitigate trauma impact is that individuals do not feel alone and isolated to manage a PTE on their own, even if a presenting problem is not discussed (Donnelly, 2010). Sometimes individuals feel support just by being in close physical proximity to others or by interacting with friends (Ferrari, Harriott & Zimmerman, 1999).

Whether informal debriefing among friends through casual conversation, or debriefing as a formal process through a work environment, studies in the area of critical incident stress debriefing (CISD) suggest the practice to have advantages and disadvantages (Harris, Baloglu & Stacks, 2002). Some studies suggest that CISD can be utilised as a preventative approach to PTEs for emergency services personnel and suggest benefits using CISD in organisational settings (Tuckey & Scott, 2014). Additional studies suggest that the benefits of CISD are supported by employees and organisations alike who encourage and promote the use of CISD, suggesting that debriefing helps foster an overall sense of belonging and community among employees (Adler et al., 2008; Aucott & Soni, 2016).

Support networks typically facilitate some degree of vocal expression, or debriefing, about a particular difficulty, and provide an opportunity to eventually disclose a concern (Crevier, Marchand, Nachar & Guay, 2015). One particular study proposed replacing the ‘debriefing’ practice with a comprehensive Employee Assistance Program (EAP) to help paramedics more effectively mitigate the impact of working with trauma (Scully, 2011). Scully (2011) suggested that the multi-layered model requires efficacy on all levels to provide the desired benefit to paramedics. In Scully’s model, the Peer Support Officer (PSO) and their thorough training was pivotal in developing an effective peer support program. It was suggested that the PSO must be strategically recruited, receive professional supervision, participate in annual ‘psychological first aid’ training and attend counseling skills development workshops.

After the correct PSO has been selected, effective collaboration efforts are then required between the employer, professional supervision counsellors, and the extensively trained PSO to help ensure sufficient paramedic support. In addition, Scully (2011) emphasised the importance of early support intervention as a key to avoiding long-term psychological distress in paramedics. An important point noted by Scully was the need for an extensive, multi-layered, peer support program to help paramedics mitigate trauma within the workplace environment. This increased and conscious awareness of potential trauma impact and need for support networks would also suggest that a high level of cognitive processing may be required. Cognition, or an individual's ability to process information effectively, is often seen as complementarity with EI because each requires a degree of competency to facilitate the other (Agnoli, Mancini, Andrei & Trombini, 2019).

2.6.3 Cognition.

Cognition is the next variable to consider in relation to trauma management and resilience. Cognition is defined as the cognitive ability to efficiently and effectively process thought and environmental information, based on a foundation of knowledge and previous life experience (Beck, 1964). In regards to trauma, effective cognition helps individuals process and analyse emotions, thoughts and beliefs in order to gain information about a traumatic event, and is the thinking 'processor' that helps reconcile traumatic events (Ehlers & Clark, 2000). As with EI, cognitive efficiency varies from one person to the next, especially when it comes to the management of trauma (Ingram, Miranda & Seal, 1998).

The increasing number of studies in the field of psychopathology research in the field of cognitive vulnerability and its association with symptoms of depression, anxiety, and PTSD suggests that research has greatly increased in this area over the past two decades. The underlying premise of Ingram's and associates *Cognitive Vulnerability Model* (1998) is that cognitive competencies and tendencies vary between individuals, particularly when cognitively processing traumatic events. Research in this area suggests that the cognitive processing of a traumatic event can be bypassed and deliberately avoided for self-preservation purposes (Zhao, 2009). For individuals who rely on the logical, systematic, and efficient processing of trauma related information, effective cognitive processing plays a vital role (Reyes, Reyes & Skelton, 1997).

When processing trauma, some people have negative tendencies of cognitively processing information and are more prone to exhibit symptoms of anxiety and depression (Riskind, Black & Shahar, 2010). In relation to PTSD, negative cognitions, especially regarding one's self and the world around them, can play a crucial role in the onset of PTSD symptoms and tend to undermine trauma recovery (Moser, Cahill & Foa, 2010; Moser, Hajcak, Simons & Foa, 2007). Moser and associates (2010) suggest that PTSD is directly induced by negative perceptions of self and viewing the world as a 'dangerous' place. These negative perceptions of self in relation to traumatic events can reinforce negative cognitions (Cieslak, Benight & Lehman, 2008; Foa & Cahill, 2001). Conversely, individuals who experience positive cognitions of self and of the world around them, have a stronger sense of personal safety, security, and tend to find daily evidence that supports positive cognitions, even in the face of a traumatic event (Moser, Hajcak, Simons & Foa, 2007).

Subsequent studies of self-cognition found significant correlations between the severity of PTSD symptoms, comorbid depression, and predictors of future PTSD development (Meiser-Stedman, Dalgleish, Glucksman, Yule & Smith, 2009; Schindel-Allon, Aderka, Shahar, Stein & Gilboa-Schechtman, 2010). Studies exploring treatment outcomes support the notion that cognition influences symptoms of PTSD and depression, suggesting reductions in the severity of PTSD symptoms following intervention strategies, which in turn could help improve one's sense of self and negative cognitions (Moser, Cahill & Foa, 2010). Conclusions from Moser and associates' cognition studies (2007; 2010) suggest that how an individual cognitively processes information could contribute to the development of PTSD and depressive symptoms.

Moser and associates (2010) investigated PTSD and trauma related cognitions in an effort to explore cognitive vulnerabilities and models of emotional scarring (Moser, Cahill & Foa, 2010; Shahar, Noyman, Schnidel-Allon, & Gilboa-Schechtman, 2013). The *Scarring Model* suggests that depression adversely impacts personality and cognition, leaving long-lasting detrimental changes in sufferers (Lewinsolm, Steinmetz, Larson & Franklin, 1981; Moser, Cahill & Foa, 2010). One hundred fifty-six participants took part in a four step test-retest series measuring PTSD symptom severity and a Post-Traumatic Stress Cognition Inventory of self (PTCI), over a 12 week period following a traumatic event (Foa, Ehlers, Clark, Tolin & Orsillo, 1999).

Clark, Tolin and Orsillo (1999) found strong connections between PTCI-self and vulnerability in relation to the *Scarring Model*, more specifically with PTSD symptoms and post-traumatic cognitions. In the first testing, the severity of PTSD symptoms predicted an increase in PTCI scores of self after two weeks following a traumatic event. Consecutive testing of both vulnerability and *Scarring Models* enabled detection of a severe, cognitive-symptomatic cycle, whereby PTSD symptoms generated negative cognitions of self, which in turn increased observable symptoms of PTSD. Results suggest that PTSD symptoms modified participant perceptions of self and elicited negative cognitions. Findings suggested a need for psycho-education, about the way PTSD can adversely alter one's sense of self and how cognitive restructuring could help interrupt the cycle of severe negative symptomatology. Taking a pre-emptive approach, some studies have investigated predisposed vulnerability factors that could contribute to an individual's risk of developing PTSD symptoms (Bomyea, Risbrough & Lang, 2012). Bomyea, Risbrough and Lang (2012) suggested that biological factors and cognitive factors are two main pre-trauma risk contributors associated with the onset of PTSD for individuals. Bomyea and associates suggested that the biological vulnerability risk includes variables associated with the heritability of PTSD symptoms, including molecular genetic components, serotonin gene components, and the genes that control hormone levels, such as adrenaline and dopamine.

The cognitive vulnerability component that Bomyea and associates identified includes intelligence, neuropsychological performance, cognitive bias, negative attribution styles and rumination habits (Bomyea et al., 2012). Based on Bomyea and associates findings as well as other more recent studies (Oulton, Strange, Nixon & Takarangi, 2018), it could be possible that people who process cognitive information quickly could also process trauma in the same way. A recent study suggested that quick and efficient cognitive abilities contributed to trauma by overthinking or ruminating about a traumatic event (Oulton, Strange, Nixon & Takarangi, 2018). Other studies suggest that negative cognition habits prior to a traumatic event can predispose people to PTSD symptomology (Su & Chen, 2018). The flexibility of cognition may even have the potential to help some individuals mitigate symptoms of PTSD and reduce aggressive behaviour (Dutra & Sadeh, 2018). Other individual factors, such as personality characteristics, have also been identified as resilience variables (Zimmerman et al., 2014).

As the above studies suggest, an individual's cognition has been identified as an important factor in trauma management and resilience in general. Such information could help a number of professions manage the effects of frequent exposure to PTEs, including paramedics. In addition to cognition, research supports the notion that effective trauma management comes from individuals having support networks (Crevier, Marchand, Nachar & Guay, 2015) and robust emotional intelligence (Espinosa & Rudenstine, 2018). A further area of research that contributes to trauma management is personality (Ahmed, 2015; Eley et al., 2013)

2.7 Personality and Resilience

Research suggests that individual personality characteristics can influence resilience and an individual's ability to effectively manage stress (Ahmed, 2015; Smith, 2006; Eley et al., 2013). Personality is defined as the dynamic psychological organisation of systems inside a person, which creates a person's character patterns, which in turn influences behaviour, thoughts and feelings (Carver & Scheier, 2000). Carver and Scheier suggest that personality is accompanied by internal causality and consistency, which contributes to how people are similar to one another, as well as distinctly different. Personality is an important variable to consider when it comes to resilience because studies suggest that people with different personality attributes may manage stress in many different ways (Deviva et al., 2016; Hirano & Saeed, 2018; Kahler, 1982). These different ways of stress management influence levels of resilience from one person to the next (Deviva et al., 2016). Studies suggest that personality is a variable that is present in much of the resilience literature (Ercan, 2017; Oshio, Taku, Hirano & Saeed, 2018). A 2011 study (Lecic-Tosevski) found that resilience and vulnerability to stressors, as well as intensity of stress response, are greatly contingent upon age, gender, intelligence and numerous personality characteristics such as hardiness, locus of control, self-efficacy, self-esteem and optimism. Lecic-Tosevski (2011) identified that people who demonstrated more resilient behavior also exhibited an increased ability to cope with stressful situations, stayed engaged in activities without withdrawal, and were more flexible when adapting to unexpected life changes. More resilient behaviour was also demonstrated by; proactively seeking social support when required, perceiving stressful situations as an opportunity for personal growth, more proactively meeting physical needs, exhibiting more optimism, and using humour more frequently in stressful situations (Lecic-Tosevski, 2011).

2.7.1 Personality belief systems.

While personality attributes have been identified as an important resilience variable, the associated beliefs that underpin personality were also found to contribute to stress management and resilience (DeViva et al., 2016). Some models and theories in the field of personality suggest that people with certain personality characteristics can process cognitive information more quickly and more efficiently than others (Guillette, Naguib & Griffin, 2017; Kahler, 1982). For example, Kahler's *Process Communication Model* (PCM; 1982) outlines six different personality types (*reactor, workaholic, persister, dreamer, promoter* and *rebel*), each with a range of unique personality attributes and associated beliefs (Kahler, 1982). Kahler described *workaholic* personality characteristics as being organised, systematic, logical, and with an innate ability to quickly process large volumes of cognitive information; whereas other personality types require much more effort to perform the same cognitive functioning. By way of comparison, a person with *persister* personality characteristics perceives the world through a traditional belief system, a persevering nature, and tends to be driven by their dedication to values, ethics and morals. As the name suggests, the *persister* personality type is persistent in pursuing their goals, especially when facing challenges and difficulties, such as trauma situations. Kahler's PCM theory suggests that personality belief systems greatly influence an individual's ability to effectively manage severe distress, including trauma. For example, Kahler suggests that each of the six personality types (*reactor, workaholic, persister, dreamer, promoter* and *rebel*), perceive the world around them in unique ways, communicates using different 'channels' of communication, have different social interaction styles, different psychological needs, and behave in very different and predictable ways under duress.

In addition to Kahler's PCM model, other personality studies have identified that individual belief systems, schemas and perceptions influence effective trauma management and contribute to resilience (Shuwiekh, Kira & Ashby, 2018). The variety of existing personality models emphasises the differences between personality characteristics and the numerous ways in which people view the world around them. Some personality theories, for example, incorporate the variables of individual perception, motivation, and belief systems into their descriptions of personality attributes and characteristics (Costa & McCrae, 2010; Kahler, 1982; Smith, Edens, Clark & Rulseh, 2014). McCrae and Costa's (1983) personality attribute of 'Openness' in the NEO-PI inventory refers to an individual's willingness, or

motivation, to participate in new experiences. While motivation may not be a direct personality attribute identified by McCrae and Costa, the attribute of 'Openness' does suggest that motivation would be influenced by a high or low willingness to participate in new experiences.

Studies also suggest that belief systems associated with specific personality attributes can not only contribute to resilience, but may also contribute to an individual experiencing Post Traumatic Growth (Simpson, Bendall, Patterson & Middleton, 2012). Applying these personality belief systems to paramedics, one could extrapolate that belief systems play an important role in their day-to-day life because of of how personality can influence individual attitudes and perceptions (Smith, Edens, Clark & Rulseh, 2014), especially when it comes to their commitment and dedication to helping save lives (Leibold, Lassen, Lindenberg, Graf & Wiese, 2018). Some personality studies support the notion that a paramedic's belief systems, personal schemas and perceptions of the world can greatly influence how individuals manage stressful situations (Smith, Edens, Clark & Rulseh, 2014). Personality traits, and associated beliefs have also been linked with a tendency to use alcohol as a coping mechanism in traumatised individuals who have symptoms of PTSD (Hawn et al., 2018; Sells et al., 2016). Hawn and associates (2018) explored the personality typologies and comorbidity with PTSD symptomology and alcohol consumption among 326 participants. Hawn found that a variety of cluster groups existed, each with variations in personality attributes, PTSD symptomology, and alcohol consumption. Results suggested that people with specific personality attributes were more prone than others to have low stress coping strategies, high PTSD symptoms, and high alcohol consumption tendencies. The results from Hawn's study suggested that personality characteristics significantly contributed to PTSD susceptibility and high alcohol consumption tendencies.

2.7.2 Personality among disaster relief workers.

Disaster relief workers have also been known to be exposed to PTEs on a regular basis. One particular study investigated individual personality attributes and individual resilience following a large Christchurch, New Zealand earthquake in 2011 (Milojev, Oborne & Sibley, 2014). Investigators measured the six personality attributes of Extraversion, Agreeableness, Conscientiousness, Emotional Stability, Openness to Experience, and Honesty. Two separate personality attribute measurements were collected from 3,914

Christchurch residents. The first personality measurement was collected in 2009, and the second measurement was collected from the same participants in 2011, just after the earthquake. Results found remarkable consistency between the first and second personality measurements across all six personality attributes, suggesting that personality attributes are stable, regardless of an individual's exposure to trauma. Milojev and associates suggested that specific personality attributes greatly influenced participants' ability, or inability, to effectively manage extreme stress, trauma, and risk to their own lives during the earthquake. In applying this information to the current paramedics study, if specific personality attributes were contributing factors to the management of trauma from a natural disaster, then one could hypothesise that personality attributes could potentially play a part in the effective trauma management and career longevity of veteran paramedics.

2.7.3 Personality and resilience among medical doctors.

Research conducted with non-emergency doctors examined the relationship between resilience and specific personality attributes in an effort to identify key traits that promote or impair resilience (Eley et al., 2013). Researchers took an Australian cross-sectional cohort of 479 general practitioners and used the *Temperament and Character Inventory* to measure seven different personality attributes. Results found that high levels of resilience positively correlated with the personality traits of maturity, responsibility, optimism, perseverance, and cooperation. Findings suggest that personality attributes were a key contributing factor to improved functional capacity, personal well-being, and resilience in doctors. Eley and associates suggested that the development of resilient personality attributes and associated strategies could help enhance resilience in medical doctors, but recommended that further research be conducted to help build upon their findings. Personality and resilience among medical doctors is relevant to the current study because personality attributes may also contribute to resilience in veteran paramedics and so may need to be thoroughly investigated in future studies.

2.7.4 Personality and resilience among emergency doctors and paramedics.

Personality and resilience studies have also been conducted within the field of emergency medicine with doctors and paramedics. One of these (Eley et al. ,2013) explored the personality attributes of emergency room doctors and paramedics and their influence on the behaviour and decision-making processes during their critical situations (Pajonk et al., 2011). Pajonk and associates (2011) utilised the Hamburg Personality Inventory to measure personality characteristics of 627 emergency doctors, paramedics, non-emergency medical doctors, and medical students. Results identified four common personality characteristics across all participants that influenced behaviour and decision-making during critical situations. Results from Pajonk and associates (2011) study found that participants who scored high in the four areas of Anxiety, Insecurity, Neuroticism and Openness, were found to be less resilient in critical emergency situations. An interesting finding among these four professions was that the majority of emergency doctors and paramedics scored low in all of these areas. Pajonk and associates (2011) found that emergency medical doctors and paramedics who scored low in these four personality attributes, were less vulnerable to feelings of insecurity and anxiety in emergency situations, which suggested higher levels of resilience in these participants. Results also found that participants who scored low in Anxiety, Insecurity, Neuroticism and Openness had a greater propensity for working with trauma without being compromised and were at a lower risk of developing PTSD symptoms.

2.7.5 Personality and PTSD among paramedics.

Significant personality research related to the current paramedic study was undertaken by Shakespeare-Finch, Gow & Smith (2005), exploring personality characteristics, coping with trauma mechanisms, and post-traumatic growth (PTG) in emergency ambulance personnel (The Five Factor Model (Costa & McCrae, 1992) was used to measure the personality attributes of Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness, in five-hundred and twenty-six participants. These five personality attributes were examined against positive or negative outcomes for participants following a traumatic event, measuring their ability to manage trauma and associated PTG. Results suggested that personality attributes and participant's ability to cope with trauma were significantly influenced by PTG. More specifically, Shakespeare-Finch and associates (2005) found that participants who scored high in Extraversion, Openness,

Agreeableness, Conscientiousness, and Coping, were also found to score high in PTG suggesting that personality attributes and PTG significantly contribute to an individual's ability to cope with stress and the associated emotions. The study concluded that personality attributes and a paramedic's ability to cope greatly contribute to positive outcomes following a traumatic event. Results also suggest that enhancing a paramedics well-being is beneficial for emergency services in general and helps encourage future training and specifically designed interventions in areas of paramedic resilience. Based on the above studies, personality attributes may be an ongoing influential variable that contributes to veteran paramedic resilience and the longevity of their career. If personality characteristics do contribute to veteran resilience, this may suggest that psychometric testing during the selection and recruitment process could assist in predicting a paramedic's vulnerability to the trauma to which they will be exposed. The current research was conducted to help acquire a more in-depth understanding about the veteran paramedics' experience and explore variables that may contribute to their trauma management and career longevity.

2.8 Past Experience with Trauma

Another area of trauma related research that was found to influence trauma management and resilience was an individual's past experience with trauma (Ogle, Rubin & Siegler, 2015; Singh & Manjula, 2018). One study suggests there to be four different scenarios to consider when trauma affects an individual (McCormack & Issaakidis, 2018); those not affected by trauma who have no past experience with trauma, those not affected by trauma who have past experience with trauma, those affected by trauma who have no past experience with trauma, and those affected by trauma who have past experience with trauma. For some individuals, frequent exposure to traumatic experiences helps them become more resilient and manage trauma more effectively (Chan, Young, & Sharif, 2016; Silverstein, Lee, Witte & Weathers, 2017). Others, who are frequently exposed to trauma can be re-traumatised with each subsequent traumatic event (Kleim, Graham, Bryant & Ehlers, 2013). Some theories and conceptual models suggest that people who become emotionally and psychologically stronger following trauma exposure, experience more post-traumatic growth (PTG) (Eve & Kangas, 2015).

As previously discussed in chapter one, PTG is the individual growth that takes place following a traumatic event becoming psychologically stronger than prior to the traumatic experience (Ogle, Rubin & Siegler, 2015). Unfortunately, the compounding effects of unresolved trauma over time can incapacitate individuals and result in severe mental and psychological disorders (Winje, 1996). Studies suggest that the type of traumatic exposure (Vaughn-Coaxum, Wang, Kiely, Weisz & Dunn, 2018; Wamser-Nanney, Howell, Schwartz & Hasselle, 2018), the frequency of trauma exposure (Carmassi et al., 2014), the intensity of a traumatic event (Gehrke & Violanti, 2006), and the duration of trauma exposure (Goral, Lahad, & Aharonson-Daniel, 2017), contributes to the trauma impact an individual may experience.

Studies suggest that a multiplicity of factors can contribute to an individual's experience with trauma, such as; the age of the person when trauma occurred (Palic et al., 2016), the extent of past trauma impact (Ashbaugh, Marinos & Bujaki, 2018), the efficacy of past trauma management (Beidel, Frueh, Neer & Lejuez, 2017), genetic predisposition (Trotta et al., 2016), individual coping strategies (Hassija, Donn, Garvert & Cloitrel, 2015), available support networks (Savage & Russell, 2005), child development factors (Briggs et al., 2014; Gardner, Qualter, Whiteley, 2011), individual perception (Smith, Edens, Clark & Rulseh, 2014) and cognition (Dutra & Sadeh, 2018). As the range of literature suggests, numerous factors can contribute to the differences in an individual's past experience with trauma. Some individuals have little negative reaction, or lasting effects after being exposed to a traumatic event, while others immediately begin to display symptoms of PTSD (Bosmans, Van der Knaap & Van der Velden, 2016). If an individual's past experience with trauma has the potential to influence their resilience and ability to effectively manage its effects, then consideration of this factor could be significant in the training of paramedics.

2.9 Paramedic Training

Paramedic training is another important variable to consider in a paramedic's ability to manage work-related trauma. There are many different types of paramedic training programs throughout the world, some of which are overseen by a governing and regulating body, and some that are conducted 'in-house' within individual organisations (Girrbach, Bernhard, Wessel, Gries & Bercker, 2017; Smith, 2015). Unfortunately, many 'in-house' paramedic training programs are not accountable to any registration process or governing body, which

means that the quality of training competencies are not monitored or enforced (Tu et al., 2013). In the absence of registration processes and standardised training, the quality of paramedic care cannot be ensured, resulting in a wide range of different competencies between local, regional, inter-state, and internationally (Edgerly, 2010; Emergency Medical Services (EMS), 1992; Moritz, 2018; Simpson, Thyer & Van Nugteren, 2016).

Paramedicine in the United States (U.S.) has been considered by some to be among the highest standard of paramedic competencies in the world and is strictly regulated and governed to help ensure a high quality of paramedic care to members of the general public (Anderson, et al., 2012; Roudsari et al., 2007; Salzman, Page, Kaye & Stetham, 2007). The type of paramedic training may vary from one state to another but all paramedic programs in the U.S. must adhere to a minimum standard of practice. To help ensure quality of practice, paramedic training programs in the U.S. typically rely upon a particular system of training supported by resource manuals (Griffiths, 2010), such as Brady Emergency Care (Brady, 2016; Limmer et al., 2015) or Mosby (Cross & Tobler, 2003).

The delivery of paramedic training also varies from one program to another (Williams, Fielder, Strong, Acker & Thompson, 2015). Some paramedic training programs in the past were predominantly practically based and delivered 'on the road' through 'hands-on training' with a small portion of theory undertaken as class time (Girrbach, Bernhard, Wessel, Gries & Bercker, 2017). Today, much of the practical based training has been replaced by theory-based university training (Williams et al., 2013). Due to the limited existing literature in this area, little empirical evidence could be found about how these changes have affected paramedics. To explore these areas further, some studies suggest a need for additional peer mentoring programs to help support paramedics more in these areas (Best, Hajzler & Ivanov, 2008). Some areas within the field of emergency medicine have recognised the value of mentors in their programs and developed specific mentoring programs to help foster a sense of community and support for one another (McPartlin, Dehon, McParlane & Birnbaumer, 2019; Parekh, Lei & Brumfield, 2019). McPartlin, Dehon, McParlane and Birnbaumer (2019) suggest that fostering mentoring programs can help ease the demands and stressors of emergency residents and that senior residents may be the ideal mentors for junior residents as they most recently progressed through their junior residency years. It is unknown whether or not a mentoring program such as McPartlin and associates could apply to paramedics, but some benefits could be possible due to the similarities of trauma exposure between

paramedics and emergency room doctors. Further investigation would be required to explore these possibilities but the importance of mentors in the workplace has relevance to the current study.

2.10 Organisational Support

Organisations vary in the degree of support they provide for their paramedics (Eisenberger, Huntington, Hutchinson & Sowa, 1986; Regehr & Millar, 2007). The support services that an organisation provides to employees can also be different from the 'perceived organisational support' experienced by employees (Byrne & Hochwarter, 2008). A few of the many options of organisational support services are; Employee Assistance Programs (EAP), supportive Human Resources departments, supportive internal programs and policies, supportive management style, and paid stress leave from work. The support an organisation provides to its employees can influence the culture within an organisation and can directly and indirectly influence employee behavior (Ravasi & Schultz, 2006). Some paramedic organisations provide paid EAP counselling support to help address work-related stress paramedics experience (Bennett & Attridge, 2008). These programs provide one-on-one professional counselling support for employees through internal or outsourced counselling services.

Research suggests that EAP services for paramedics are underutilised for many reasons (Tyler, 2005). First, some paramedics perceived the use of EAP services as acknowledgment of emotional weakness and vulnerability, or fear this is how the organisation would generally perceive them. Second, 'macho' oriented cultures within some organisations had a 'suck it up and get on with it' attitude. Third, employees were scared of being dismissed from their jobs if management perceived them as weak because they used EAP services (Tyler, 2005). Other studies identified paramedics as reluctant to utilise EAP services because the counsellors provided by the organisation were perceived as inadequate, or the EAP itself was perceived as poorly managed and under resourced (Smith & Roberts, 2003).

Studies suggest that EAP's are the most successful when the employer, the mental health provider, and a trained peer support officer are working together to support paramedics on an individual and organisational level (Scully, 2011). Unfortunately, due to a lack of finances and other limited resources, many paramedic programs do not provide these

extensive and often necessary support services (Smith & Roberts, 2003; Tyler, 2005). Stress leave is another common option that many organisations provide to help support employees in high stress occupations (Willert, Wieclaw & Thulstrup, 2014). A 2002 study (Regehr, Goldberg, Glancy & Knott) with paramedics examined the relationship between traumatic stress symptoms and the use of mental health stress (MHS) leave to help recover from work-related stress. Rehegr and associates found MHS leave to be underutilised as a coping strategy for two reasons. First, employees who used stress leave as a coping mechanism were perceived to be 'weak' by their colleagues and/or the organisation. Second, paramedics refrained from taking stress leave because being at work helped keep their minds occupied and they wanted to stay busy because they were fearful that down-time would result in ruminating and intrusive thoughts, or flashbacks about traumatic work-related events, which are all symptoms of PTSD.

Rehegr's and associates (2002) also found that paramedics who utilised MHS leave more than once reported high to severe symptoms of post-traumatic stress disorder, compared to paramedics who used MHS leave once or those who did not take any MHS leave. While this study did not explore why increased symptoms of post-traumatic stress coincided with increased frequency of stress leave, they hypothesised that avoidance strategies, such as staying busy over a prolonged period of time, helped temporarily suppress the negative effects of work-related trauma. Rehegr and associates concluded that the more stress leave paramedics took from traumatic work experiences, the more symptoms of PTSD they experienced. Regehr, Goldberg, Glancy and Knott (2002) also suggested that an individual's personality characteristics appeared to be one of the strongest factors that influenced which paramedics took MHS leave from those who did not. In summary, studies suggest that paramedics were better able to manage work-related trauma and stress when supported by their organisations such as providing MHS leave, EAP support, and felt supported by management (Bashshur, Hernández & González-Romá, 2011; Hunter, Bedell & Mumford, 2007).

2.11 Types of Paramedic Trauma and Coping

There are many different types of work-related trauma that can affect paramedics such as death of a patient (especially a child), multiple casualty patients, and exposure to violence between others or violence perpetrated against them while working (Regehr, 2005). Among the different types of PTEs that paramedics were exposed to, the death of a child (Donaldson & Donaldson, 1999) and the death of a colleague (Rehehr, Goldberg & Hughs, 2002) were two of the most traumatic events that participants experience at work. The emotional and psychological impact that a paramedic might experience when arriving at an emergency scene and finding a deceased colleague, could have catastrophic effects and compromise the paramedic's well-being and the future quality of care they provide to patients (Feiner, 1987). If the death of a colleague is one of the most traumatic events a paramedic can experience at work, then the emotional impact from the increased incidence of suicide among their colleagues as experienced over the past decade, may be equally as debilitating (Kirkwood, 2012; ABC News, 2014, Appendix B) Studies have found that familial support is crucial to help paramedics mitigate the emotional stress from working with such trauma (Rehegr, 2005). Rehegr investigated the impact that paramedic stress had on their spouses and family members. The results from Rehehr's study found that paramedics often withdrew from family members after being traumatised at work. This withdrawal resulted in further isolation from the very support that paramedics previously reported was most beneficial.

Other studies suggest that paramedics consciously isolated themselves to help cognitively process and understand their overwhelming thoughts and feelings without interruption, often reporting that even they were unsure of what they were experiencing (Halpern, Maunder, Schwartz & Gurevich, 2012). Halpern, Maunder, Schwartz and Gurevich (2012) strongly recommended that training paramedics in emotional self-awareness strategies and resilience coping strategies would be vital to help them effectively mitigate and manage the trauma to which they were being exposed. Other studies have explored the variety of coping strategies that paramedics have used to deal with work-related trauma (Christopher, 2015). Christopher (2015), for example, found that many paramedics used humour as a coping mechanism to help release tension and diffuse the emotional stress by laughing, or 'poking fun' at other individuals or at the situation. While using humour may provide some short-lived temporary relief from the emotional distress, it was found to be a coping strategy used by paramedics to manage the impact from a traumatic event (Christopher, 2015).

The various strategies that Christopher (2015) identified were not by strategic design but were the innate and unplanned coping strategies that each individual had naturally developed throughout their lifetime, each with its varying degree of efficacy. Christopher found that some of the strategies paramedics used ranged from very helpful to very counterproductive and dysfunctional. The results from Christopher's study suggested that paramedics simply relied upon whatever personal coping strategies they were aware of at the time and that none of the stress coping strategies employed were premeditated or purposefully developed. Christopher's study provided important insight about paramedic coping strategies from a quantitative perspective but did not provide any in-depth qualitative information of personal experience. The current veteran paramedic study sought to add such qualitative depth to the existing literature by providing specific experiential information designed to increase understanding about the nuances of their trauma management strategies. In doing so, it is hypothesised that other information can be gleaned from veteran paramedics, such as how they manage work-life balance, burnout, and symptoms of PTSD.

Another quantitative study (LeBlanc, Regehr, Birze & King, 2011) investigating the relationships between PTSD, coping strategies and acute stress responses in paramedics, found that the extent of acute stress symptoms and physiological stress responses were heavily contingent upon the personal coping strategies of each individual participant. Even though stress coping strategies were found to be unique to the individual, LeBlanc and associates found that humour and avoidance strategies supported results found in Christopher's 2015 study. Neither of these studies discussed whether or not paramedics found these strategies to be effective but other research suggests that coping strategies such as humour and avoidance, may be suppressing the trauma related emotion which could potentially contribute to future difficulties if the combined expressions of these suppressed emotions unexpectedly manifest themselves (Sorensen & Iedema, 2009). LeBlanc and colleagues (2011) recommended that future research be conducted to develop better stress management strategies for paramedics to help mitigate the potential negative impact from work-related trauma.

2.12 Paramedic Resilience

Research in the field of paramedic resilience suggests that resilience increases over time with 'on-the-job' experience, up to a five-year peak, and then begins to dramatically decline (Gayton & Lovell, 2012). Beaton (2006) suggests that the resilience paramedics develop 'on the job,' is insufficient and that many paramedic organisations are more reactive than preventative because much of the support they provide comes after a critical incident has occurred. Beaton recommends that more proactive, preventative resilience development is required for paramedics to help them cope with work-related trauma. Beaton (2006) also emphasised that more specific education and training in resilience strategies is required for paramedic students to help them effectively mitigate the emotional effects of their future work. Beaton concluded that additional education and training in emotional and psychological trauma management could help increase paramedic resilience. Beaton proposed that regular resilience training and exercises could also help identify individual or group vulnerabilities and help arrest the attrition rates among paramedics.

Beaton's (2006) proposals are only examples of theoretical intervention strategies of resilience development. The implementation of such strategies could give rise to questions about what kind of resilience strategies are the most effective, which resilience strategies should be taught to paramedics, whether or not general resilience strategies could be applied across people with different personality characteristics or if they need to be tailored to the individual's personality types. Studies suggest a very strong link between specific personality types and resilience (Eley, Leung, Hong, Cloninger & Cloninger, 2016; Jayawickreme, Forgeard & Blackie, 2015; Škodová & Bánovčinová, 2018). Other studies suggest that the first years of a new paramedic's career is more of a desensitisation process than the gradual development of resilience (Beaton, 2006). Beaton argues that it is more of a desensitisation process through the frequency of exposure to trauma, that paramedics simply learn coping strategies and are more optimistic early in their career (Kucmin, Kucmin, Turska, Turski & Nogalski, 2018).

Returning for a moment to paramedic suicide, an immediate concern is providing assistance to help mediate the difficulties facing paramedics, difficulties which can lead to such a drastic act. As Porter et al. (2018) proffer, before intervention programs and strategies can be designed and implemented to help in this regard, a thorough understanding of the paramedics' experience must be gained from as many perspectives as possible. With this in

mind, the current paramedic study investigated paramedics' experience of managing work-related trauma in a way that had not previously been undertaken among veteran paramedics. Acquiring qualitative information about the individual, the paramedic fraternity, and coping strategies used by veteran paramedics, is expected to contribute to the limited pool of existing knowledge. While gaining this increased understanding of the veteran paramedics experience is important, it is also important to understand some existing theoretical constructs and conceptual models associated with resilience and the current study.

2.13 Summary

The current study aimed to explore veteran experiences of working with trauma in their capacity as paramedics and their strategies for managing its potential impact. Informing the study, several individual and organisational resilience models and theories; *The Metatheory of Resilience and Resiliency* (Richardson, 2002), *O'Leary and Iskovics Resiliency Model* (O'Leary & Ickovics, 1995), the *Constructivist Self-Development Theory* (Saakvitne, et al., 1998), *Posttraumatic Growth Model* (Tedeschi & Calhon, 2004), the *Principles Model of Resilience* (Gibson & Tarrant, 2010), and the *Herringbone Model of Resilience* (Gibson & Tarrant, 2010) were all drawn upon to develop a proposed model describing how veteran paramedics have remained in the workforce so much longer than the rest of the general paramedic population. These theories and models have also provided applicable information about underpinning factors of resilience associated with the veteran paramedics' experience, which will be revisited as the results are reported and discussed.

As outlined in this section, much research has been conducted among police, military, nurses and doctors, much of which has contributed toward helping them manage the trauma they worked within their respective capacities and the development of resilience training programs. As the literature suggests, the numerous factors of; personality, past experience with trauma, types of paramedic training, organisational support, and the types of trauma that paramedics are exposed to contribute to both, trauma impact and individual resilience. These factors were also relevant with veteran paramedics, which will be discussed in Chapter 4. The current study aims to address an apparent knowledge gap in existing literature with veteran paramedics about how they manage work-related trauma and which strategies, if any, contribute to the longevity of their career.

Chapter 3: Methodology

3.1 Introduction

This chapter outlines the methodological approach utilised in the current study. The sections of the chapter include: Epistemology, Theoretical Perspective, Methodology, Methods used for data collection, and Interpretative Phenomenological Analysis (IPA). In structuring the chapter, Crotty's (2009) framework was utilised. Crotty poses four important questions supporting an effective research process. Accordingly, these questions helped provide the essential elements and guidelines required for framing the current study:

1) What epistemology informs this theoretical perspective?
2) Which theoretical perspectives are behind the methodology in question?
3) Which research methodology governs the choice and use of methods?
4) Which research methods should be used? (p. 2)

Each of the above questions is discussed in detail in an attempt to obtain an accurate picture about the lived experience of veteran paramedics. The chapter then moves to a discussion of limitations and ethical considerations. After these items have been discussed, the chapter concludes with a chapter summary.

3.2 Epistemology: Constructivism

How individuals perceive the nature of knowledge is referred to as epistemology (Creswell, 2009). Constructivist epistemology refers to how individuals construct a perspective of the world in which they live (Creswell, 2009; Crotty, 2009). Such an epistemological understanding commonly underpins qualitative research. Denzin and Lincoln (2003) suggest that qualitative research is an activity that identifies observers in real experiences and interpretes their experience through a set of material practices that helps make their experience visible to the rest of the world. Creswell (2009) suggests that the greatest strength of a constructivist approach is that participants typically provide information from the subjective perspective of their own experience. These subjective experiences from multiple participants can result in a variety of emerging meanings. It is the collective 'meaning making' insights that provide the researcher with an understanding of the richness and complexity of the participants' experience. A narrative format for the purpose of gathering data is often seen as complementing a constructivist approach to research (Teddie

& Tashakkori, 2009). From a constructivist perspective, the researcher is often required to construct meaning from, and tell a story of the participants' lived experience.

3.3 Theoretical Perspective: Phenomenology and Interpretivism

It is important to differentiate between phenomenology as a theoretical perspective and as a methodological approach. Whereas the former concerns itself with a world view, the latter emphasises the nature of a practical research undertaking. Through the phenomenological theoretical perspective, the central structure of individual experience tends to be its intentionality and the way one is directed toward a particular experiential perspective in their world (Husserl, 1970). In adopting phenomenological methodology, the researcher is asserting that the structures of an individual's conscious experience, from the first-person perspective, provide a data rich source for investigative purposes. Concomitantly, one's ontology invariably informs the theoretical perspective adopted. In general terms, ontology is associated with an individual's world view, or how one views existence and experience (Crisp, 2018).

Interpretivism favours a theoretical underpinning which understands reality to be socially constructed, subjective in nature, and changeable with both circumstances and time (Blanch et al., 2017; Crotty, 2009). Interpretivism has been selected as the ontology for the current study as it is thought that paramedics are best at interpreting their own experience within a theoretical framework underpinned by experiential and socially mediated reality. Interpretivism focuses on the understanding and explanation of meaning in the context of people acting and interacting (Crotty, 2009). Interpretivism in the current study focuses on the lived experience of veteran paramedics and how they understood, explained working with, and managed, work-related trauma. Cohen (2006) suggests that by gaining an increased understanding of a participants mind, a researcher is better able to grasp the cognitive, spiritual, meaningful, emotional, and motivational aspects of the individual. Interpretivism also facilitates the development of understanding about what paramedics within the industry experience as they explain how they manage trauma.

When considering interpretivism, consideration must be given to hermeneutics. Hermeneutics is the theory of understanding and interpretation of the verbal, non-verbal and written communication of a person's lived experience and involves the principles of data interpretation (Patton, 1990). Historically, hermeneutics was founded on a combination of

the theories, concepts and contributions of Friedrich Schleiermacher in the early 1800's (Sokmen, Bal, Schleiermacher & Ozne, 2000), Wilhelm Dilthey in the mid 1800's (Dilthey, 2000), and Hans-Georg Gadamer in the mid 1900's (Gadamer & Weinsheimer, 2000). These researchers defined hermeneutics as the art of understanding and making one's self understood. Hermeneutics is based on a one-way interpretation from that person's perspective, such as an individual trying to make sense of their own lived experience, or of one person attempting to make sense of another's experience (Patton, 1990).

An example of a hermeneutic approach in the context of the current study is the researcher trying to understand a veteran paramedics lived experience from the participants' perspective. Sociologist Anthony Giddens (1987) expounded on the hermeneutic theory by proposing a concept of the double hermeneutic, which is a two-way interpretation of one person's lived experience. An example of the double hermeneutic in the context of the current study is the researcher attempting to interpret the participant's interpretation of their own lived experience. Studies suggest that the benefit of using a double hermeneutic is that it makes the participants' lived experience the focus of attention rather than the one-sided interpretation of what the data provides (Biggerstaff & Thompson, 2008).

When considering the double hermeneutic, Flick (2002) suggests it is important for the researcher to be reflective so as not to impose their own interpretation on the participants' experience. A further important concept in hermeneutics is known as the hermeneutic circle (Smith, Flowers & Larkin, 2009). The hermeneutic circle involves the dynamic relationship between the 'part' and the 'whole' on many levels. The 'circle' occurs from the cyclic pattern of looking to understand any given part in order to fully understand the whole; and to understand the whole, one needs to look at each individual part.

From an analytical perspective, it can be very thorough and effectively describe the interpretation process. The concept of the hermeneutic circle functions on many levels in order to understand the relationships between the 'part' and the 'whole' of something. Smith, Flowers and Larkin suggest that for IPA researchers, the hermeneutic circle can provide different and useful ways of thinking about which 'method' of research to adopt. Appreciation of the hermeneutic circle is important in the current research because to fully understand the whole picture of the paramedics' experience, one must understand each individual part that collectively make up the picture and to fully understand all the parts that make up a paramedics' experience, one must understand the whole picture.

The final influential factor to be considered in interpretivism is the paradigm of idiography (Smith, Flowers & Larkin, 2009). Idiography refers to what is 'particular' (or specific) about what has been communicated. The 'particular' operates on two levels, the details (depth of analysis) and how the experiential phenomena (a process, event or relationship) has been understood from a unique perspective and in a particular context. By focusing on the 'particular' the researcher is better able to understand the meaning of what an individual is experiencing. For participants in the current study, clarifying each word, sentence, concept and theme is undertaken in relation to the individual, the paramedic group, the organisation, and the industry as a whole.

3.4 Methodology: Phenomenological Research

On the basis of the foregoing discussion, phenomenology (Husserl, 1970) was identified by the researcher as the best methodological approach to achieve the desired research outcome and answer the research questions. Phenomenology is defined as the process of uncovering the essence of a phenomenon from the lived experience of an individual (Giorgi, 1997). Edmund Husserl is considered by many to be the founder of phenomenology (Crotty, 2009; Giorgi, 1997; Holstein & Gubrium, 2005). Crotty (2009) suggests that there has been an evolutionary-like development of hermeneutic theory into phenomenological theory by both Husserl and Heidegger. Husserl (1970) suggests that a phenomenological approach places the subjective experience of an individual at the centre of a research investigation and that this method is achieved through a series of data reductions until the salient themes are identified. Regarding Husserl's method of reduction, Smith, Flowers and Larkin (2009) state:

> *Each reduction offers a different lens of prism, a different way of thinking and reasoning about the phenomenon at hand. Together, the sequence of reductions is intended to lead the inquirer away from distraction and misdirection of their own assumptions and preconceptions, and back towards the essence of the experience of a given phenomenon (p. 14).*

Husserl's approach to phenomenology focussed on more of an objective view of a particular phenomena and understanding the participant through the participant's perceptions, recollections and thoughts about the world (Laverty, 2003). Heidegger's approach to phenomenology focused more on hermeneutic phenomenology, taking into account the history of an individuals' lived human experience and looking at each detail of that experience to create meaning and an increased understanding about the meaning of participant data so nothing would be overlooked or taken for granted (Wilson & Hutchinson, 1991). The current study follows Heidegger's hermeneutic phenomenological perspective by seeking out the nuances, details, and history of the veteran paramedics' lived experience.

Following from this discussion, Phenomenological Interpretive Analysis (IPA) was chosen as the methodology for the study. IPA is based on an understanding that meaning is found in the phenomenon itself. The theoretical derivative of IPA is found in Max Weber's corpus on interpretivism (1947, 1949, 1962). Weber's research in the field of sociology as a science was dedicated to the interpretive understanding of social behaviour to help determine the cause of human behaviour (Weber, 1947). Researchers in IPA suggest that its clearest application comes from the effective utilisation of hermeneutic and phenomenological principles (Crotty, 2009; Smith, Flowers & Larkin, 2009). IPA was identified by the researcher of the current study as the most effective way to help accurately analyse participant data, acquire the desired salient information, and help answer the research questions.

Heidegger suggested that IPA encouraged focus and consideration for the details and history of an individuals' lived human experience to help create meaning and increase understanding (Wilson & Hutchinson, 1991). For these reasons, IPA was chosen by the researcher as the best form of analysis, due to its effective approach in examining complicated paramedic topics or complex phenomena that may be seen as emotionally salient or ambiguous in description. The current study is a good example to illustrate such a phenomena. Veteran paramedics may experience difficulty articulating the feelings, thoughts and beliefs associated with the work-related trauma they are exposed to so frequently. Without utilising IPA, the nuances of the paramedic experiences could not only be difficult to gather and understand, but it could also be difficult for the researcher and participant to make meaning from the paramedics' experience.

Using a phenomenological interview approach was deemed to be the most beneficial way of encouraging participants to ruminate about their experience during interviews and openly express their unique perspective. This approach also helped identify salient information and themes from paramedics as a collective group. Exploring the lived experience of veteran paramedics through an interview process was also identified as the best methodological approach to help fulfil the aims of the current research because it helped elicit the desired in-depth interview information to best understand the individuals' unique perspective (Smith, Flowers & Larkin, 2009).

3.5 Research Method: Interviews

The chapter discussion thus far points to the selection of a qualitative research design. Some of the strengths of qualitative research include the gathering of; rich, in-depth participant experiential data, the facilitating of the development of new quantitative items, theory development and hypothesis generation, the discovery of new phenomena and the explaining of unexpected findings that quantitative studies cannot explain. For example, Schonfeld and Mazzola (2013) suggest that qualitative research in an organisational setting, through mediums such as employee interviews, can help provide salient information for the development of an employee survey or questionnaire that could help investigate a company wide problem. A further strength of qualitative research is that it can help with theory development and hypothesis generation as researchers allow theoretical ideas and hypotheses to organically evolve and develop without any preconceived assumptions of the outcome (Glaser & Strauss,1967).

Qualitative research can also foster the development of new hypotheses or theories that can later be subjected to quantitative analysis. Kidd, Scharf and Veazie (1996) suggest that qualitative methods are the best options when there is a need to explore an unknown phenomena and to discover new information when little information is available. For example, interviewing numerous employees who suddenly resign from a company in which they have worked for over 20 years could help identify a new manager who is the perpetrator of bullying staff members. Another strength of qualitative research is that it can help explain findings which are difficult to interpret. For example, a study conducted by Bussing and Glaser (1999) investigated why moving nurses to a hospital ward with fewer patients to care

for resulted in increased stress levels when the change in patient numbers was designed to help relieve stress on nurses. Interviews with nurses revealed that the change may have reduced the number of patients that nurses were required to care for but increased other unforeseen stress inducing factors such as additional work-load related tasks associated with starting a new department.

Conducting interviews with these nurses helped identify the increased stress that nurses were experiencing. In line with IPA procedures, the current study adopted participant interviews to help gather the necessary data. Such an approach allows the researcher to gather in-depth participant information, which would not have been possible using an empirical or quantitative approach due to its limitations in considering affective aspects such as participant feelings, beliefs and intentions. Such aspects were considered to be crucial in understanding paramedics' self-care strategies when faced with on-going patient trauma and the impact these situations had on them.

3.5.1 Individual semi-structured interviews.

Semi-structured face-to-face interviews were conducted with 12 participants, each of whom have worked a minimum of 15 years as a paramedic. Smith, Flowers and Larkin (2009) suggest that an aim of IPA is to design data collection in a way that elicits detailed thoughts, feelings and stories from participants. Semi-structured, one-on-one interviews are often the preferred method of collecting this type of rich, in-depth information. Smith (2007) described semi-structured interviews as an exemplary method for IPA research for two reasons. First, they support interpretivism and the associated phenomenological perspective facilitating the flexibility necessary for interviewers to adapt to participant responses, thus allowing them to ask more probing follow-up questions. Second, all interviews follow the same interview schedule to help maintain credibility and dependability throughout the interview process (Creswell & Miller, 2000). In the present study, consistency of following the same interview questions helped ensure that all participants provided similar topic data and enabled the credibility and dependability of the data analysis process.

3.5.2 Data collection and data sampling.

The participant sample was a judgement sample (or purposeful sample; Black, 2010). Black (2010) defines judgement sampling as a non-probability sampling method that occurs when participants are chosen, and based on, the researcher's judgement that they would be able to help answer the research questions. A judgment sample was used in the current study because it allowed participant data to be collected from a targeted veteran paramedic cohort, who met specific work experience criteria. The main criteria required to participate in the current study was that participants had worked as a paramedic in a full-time capacity for 15 subsequent years or more. Participants were considered from any industry or sector that employed paramedics. The collection of data (interviews) commenced in March, 2016 and concluded in June 2016.

While it was not required for paramedics to be a homogenous sample, the sample was homogenous in that all participants worked in ambulances on the road but were not all employed by any singular paramedic organisation. Initially participants were identified and recruited by contacting the Human Resources department of six different organisations who employed paramedics. All six organisations were receptive and agreed to distribute research information letters (See Appendix C), introductory letters for organisations (Appendix D), and researcher contact details. Organisations were then asked to electronically distribute the research information to their paramedic employees to help identify potential participants.

Another effective recruitment strategy that procured more than half of participants was 'snowball' recruitment or "word of mouth." After each participant interview the researcher asked the participant if they knew any friends or colleagues who would be willing to participate. Participants shared the researchers contact details with friends and colleagues who then contacted the researcher. Research information sheets were emailed to potential participants and appointments were organised for interviews. Prospective participants directly contacted the researcher by phone or email to organise an appointment for an interview. To help maintain confidentiality and anonymity, participants were allocated a sequential number ranging from one to twelve, and a coding system was used to help identify and isolate participant information and data. All participant data was collated and organised using Microsoft Office Excel software in order to track the researcher's journaling from each participant interview, record detailed information, organise participant data on seperate sheets, and collate all participant information on one spreadsheet for ease of identifying

similarities and differences. This also allowed the data from each participant to be kept on separate spreadsheets and easily accessible and stored. All participant data was stored on a password protected data device and backed up on a password protected digital hard drive for long term storage.

3.5.3 Participants

The study gathered data from veteran paramedics who had 15 or more years experience working full-time. Veteran paramedics were chosen for several reasons. First, veteran paramedics with over 15 years of work experience have worked much longer than the average five-year work life, suggesting demonstrated resilience. Second, studies support the notion that knowledge and experience often comes with age (Kilanska & Priest, 2014). In other words, the longer a person lives, the more life experience, maturity, and learning takes place, resulting in more personal growth (Kilanska & Priest, 2014). Veteran paramedics were also chosen as the research cohort of focus because of their demonstrated career longevity and life experience, which was anticipated to help reduce the risk of re-traumatisation during the interview process (Anderson, Fields & Dobb, 2013). A semi-structured interview schedule was designed with associated open-ended questions as recommended by Bjornholt and Farstad (2012; Appendix E). One could speculate from Anderson, Fields and Dobb's (2013) research that veteran paramedics have a larger knowledge base and life experience than young paramedics. This increased knowledge base and life experience may better enable them to manage work-related trauma throughout their career.

Twelve veteran paramedics practicing paramedicine in Western Australia were interviewed. Participants came from different organisations and had experience working in a variety of industries, consisting of work 'on the road' in an ambulance, on mine sites, emergency services, transport industries and in numerous private organisations. At the time of interviews, all participants were working on the road and not all participants worked for the same organisation. Twelve participants were chosen for two reasons. The first reason was because data saturation had been achieved after the twelfth participant (Francis et al., 2010; Guest, 2012). Data saturation is defined as the position during the interview process where no new participant information is received and similar responses begin to be heard repeatedly (Guest, Bunce & Johnson, 2006). Second, Guest, Bunce and Johnson suggest that in qualitative research, 12 participants is the typical number of participants required to

achieve data saturation. The current study was consistent with Guest, Bunce and Johnson because data saturation in the current study was achieved with participant 11 and 12. The paramedic profession has been a male dominated industry from its inception (Federiuk, O'Brien, Jui & Schmidt, 1993). However, over the past decade more female paramedics have joined the industry (Crowe, Krebs, Cash, Rivard, Lincoln & Panchal, 2019). A gender balance among participant sampling would have been preferred, and was attempted, but was not achieved due to the limited number of female veteran paramedics available to participate. For this reason, seven participants were male and five participants were female. Participants came from a variety of different backgrounds, cultures and training locations. To maintain the anonymity of participants, current age ranges, a range of years experience and approximate age participants commenced training were provided. Table 3.1 provides an overview of participant diversity.

Table 3.1

Participant Diversity Overview

Participant	Male/ Female	Age Range	Experience Range (Yrs.)	Training Location	~Age@ Training
1	Male	40-45	15-20	Foreign	25yrs.
2	Male	50-55	30-35	Australia	18yrs.
3	Male	40-45	15-20	Australia	26yrs.
4	Male	50-55	30-35	Foreign	22yrs.
5	Male	50-55	15-20	Australia	30yrs.
6	Female	45-50	25-30	Australia	25yrs.
7	Male	45-50	25-30	Foreign	24yrs.
8	Male	45-50	20-25	Foreign	21yrs.
9	Female	55-60	35-40	Australia	20yrs.
10	Female	45-50	25-30	Australia	21yrs.
11	Female	45-50	25-30	Australia	25yrs
12	Female	45-50	25-30	Australia	20yrs.
Minimum:		35yrs.	15yrs.	N/A	18yrs.
Maximum:		57yrs.	36yrs.	N/A	30yrs.

All participants received practical based training where they received very brief in-class training (ranging from 1 to three months) with the balance of training being received on the road through practical experience. Two participants transferred from another medical based training background. Three participants became involved from a medical influenced cadet training program. Two other participants were recommended paramedicine from friends or family. Four participants just 'stumbled' across the profession after seeking a career change, and one participant became interested in paramedicine through the injury of a loved one. Of the total number of participants, approximately one third were locally trained in Western Australia, one third were trained in other parts of the world and another third were trained in other parts of Australia.

Participants' work experience represented a range of different industries, including: fire and rescue, patient transport, mining, construction, oil and gas, military, and other private organisations. The large majority of participants received training in practical-based training programs as opposed to university-based training programs. There were slight variations in the type of practical-based training participants received, but the majority were 6 months of in-class theory and 18-24 months of 'on-the-road' training. University-based paramedic training programs were predominantly theory based, with a much smaller proportion of time allocated to practical-based 'on-the-road' training. To help maintain participant anonymity the locations of training programs will not be disclosed, but participants received training in various states throughout Australia or in other locations throughout the world.

3.5.4 Materials and procedure.

Interviews took place in one of two of the researcher's private office locations and ranged from 60 minutes to 90 minutes in duration. Upon arrival at the interview, participants received an information letter (See Appendix C) outlining the details of participation. Any participant questions about the research were answered, after which, participants were asked to sign a written consent form (See Appendix F), agreeing to the parameters of participation outlined in the information letter. Each interview was audio recorded as advised in the participant consent letter (See Appendix F) and transcribed verbatim following each interview. Transcripts were proofread by the researcher while listening to each of the respective audio recordings, to verify accuracy. The lines of each transcript were also numbered to assist with the reporting of results.

3.5.4.1 Journaling.

Creswell (2009) suggested that ongoing thoughts and reflections about data and processes are common during the qualitative analysis process. For this reason, the researcher of the current study began writing notes in a journal to document their own experience of the research process. This was considered an invaluable instrument, used after each participant interview and at different points during the analysing process. The researcher journaled positive and negative feelings, thoughts, beliefs, potential bias, interactions with participants and experiences. Originally, the researcher anticipated that the journaling process would help provide; consistency in the analysis of data, clarity in ensuring the same steps were carried out with each participant, consistency in carrying out the overall research processes, and some aspects of reflexivity. Over time the insights gained from journaling became more valued to the researcher than the functional aspects originally assumed. Journaling became an invaluable part of the reflexivity process, and contributed to the credibility and dependability of the current study.

3.6 Data Analysis: Interpretative Phenomenological Analysis (IPA)

The analysis of participant data in the current study commenced in June 2016 and concluded in December 2016. Utilising IPA in the current qualitative study from a phenomenological approach, involves a double hermeneutic for the researcher to interpret the participants' interpretation of how they managed trauma as a veteran paramedic. Interpretative Phenomenological Analysis (IPA) was used in the data analysis process. IPA has its theoretical origins in the areas of phenomenology and hermeneutics, developing key ideas from studies conducted by Husserl, Heidegger, and Merleau-Ponty (Smith, 2007). A distinct difference between IPA and other qualitative analysis approaches is, in part, how IPA combines psychological, interpretative, and idiographic components to help capture a holistic picture of individual experience (Gill, 2014). This information and process helped create an in-depth understanding of the participants' lived experience and helped find meaning in how veteran paramedics effectively manage work-related trauma and what factors contributed to their career longevity.

Utilising IPA also helped identify, examine, and record salient patterns, or 'themes,' within the group of participant data. These themes represent consistent and important participant responses across all data, which were used to help answer the research questions and fulfil the aims of the current research. IPA was chosen over other qualitative analytical methods, due to its capacity to help answer the research questions and due to its flexibility of descriptive patterns across the qualitative data, which is easier than other more complicated forms of analysis, such as, discourse analysis (Clarke, 2005), thematic decomposition analysis (Ussher & Mooney-Somers, 2000), and grounded theory analysis (McLeod, 2001). IPA was also chosen in the current study due to its flexibility in adopting multiple theoretical constructs to be applied across a variety of epistemologies. IPA can accommodate large sets of participant data gathered from multiple sources, such as paramedic interviews. IPA also allows categories, or 'themes,' to emerge from the data, which in turn helps to create a picture of what the participants are saying, both individually and collectively. Another advantage of IPA is that it enables the researcher to add subsequent studies and additional data as required. A further benefit was that it captured general concepts and rich, in-depth, participant descriptions about their experiences (Braun & Clark, 2006; Smith & Osborne, 2008).

3.6.1 Reflexivity

Reflexivity is a critical component of the interview process and IPA and Neuman (2005) suggests that the recording of thoughts and personal notes are how the researcher thinks out loud. Furthermore, Neuman suggests that researcher notes help the researcher more clearly distill the essence of the participants experience and is beneficial during the process of data reduction. Of necessity, qualitative methods are inclusive of the researcher's interactions with participants. Flick (2002) suggests that as part of the research process, researchers should be aware of their own observations, thoughts, impressions and feelings as such information becomes data by itself, this process is called reflexivity. According to Lincoln and Guba (1985), the theory of reflexivity suggests that a researcher's opinions and bias can interfere with the accuracy of participant data. As part of the reflexivity process, qualitative researchers strive to identify their own thoughts and impressions in conjunction with themes or inductively find patterns of meaning from the first to the last interview. This reflexivity process of IPA involves a double hermeneutic for the researcher when interpreting participants' interpretation of how they managed trauma as a veteran paramedic.

The researcher experienced the reflexivity process maintaining a personal journal during the IPA process. Reviewing journal entries was beneficial in many ways. First, reviewing the personal notes about the researchers' learning experience with IPA helped gain an appreciation for the process and nuances associated with IPA. Second, journaling provided insights about the researchers personal learning and growth in conducting qualitative research. Third, it fostered a habit of introspection and scrutiny about any potential researcher bias, which in turn helped keep the researcher sensitive and vigilant throughout the data analysis process and avoid skewed perspectives which could interfere with the results. Fourth, an appreciation throughout the introspective process of reflexivity was gained very beneficial as it. For example, a potential bias identified by the researcher was their own past training and experience working as an EMT in the USA.

After each participant interview, and throughout the analysis of each respective transcript, the researcher reflected on each part and journaled any thoughts, feelings, beliefs, judgements or potential bias about the interviews or participant transcripts. To help illustrate this the researcher identified a judgement and criticism about paramedic training in relation to the training the researcher received in the USA. As data were being analysed and additional participants were being interviewed, a picture began to develop regarding the results associated with paramedic training. Being aware of this potential bias and its influence, the researcher was vigilant about ensuring that participant quotes were accurately identified, represented, and interpreted to avoid a biased interpretation of data that could unfavourably skew perspectives one way or the other. Being aware of this potential bias also helped the researcher provide a more objective and hermeneutic phenomenological interpretation of the participants' lived experience and increased understanding.

This methodology chapter provides an overview of the data analysis process and is followed by more specific examples of how data from participants were analysed. In utilizing the IPA analytical approach, Smith & Osborne (2008) highlight the importance of avoiding too prescriptive of a process that may undermine the analysis of participant information. In following such advice, Smith, Flowers and Larkin (2009) suggest that a step-by-step interpretative approach be used as a general guideline when analysing participant data. The six steps recommended by Smith, Flowers and Larkin (2009), which were adopted in the current study, are:

Step 1: Reading/re-reading and listening, to identify emerging themes

Step 2: Initial Noting

Step 3: Developing emerging themes

Step 4: Identifying connections across emerging themes

Step 5: Moving to the next participant

Step 6: Looking for patterns across participants

How these steps were interpreted in relation to the present study is found in Table 3.2:

Table 3.2

Overview of Interpretative Phenomenological Analysis (IPA) Steps as per Smith, Flowers and Larkin (2009)

Step 1: Reading/re-reading and listening, to identify emerging themes	Interview transcripts were repeatedly read for familiarity. Audio recordings were reviewed to listen for nuance, tone of voice, and emphasis on words. The basic identification of 'emerging' themes was also conducted in Step 1.
Step 2: Initial Noting	Examining and exploring the semantic content for salient information and identifying descriptive participant comments.
Step 3: Developing emerging themes	Transcripts were re-visited to help further develop emerging themes by mapping the interrelationships, connections and patterns between Step 2 notes. During this step, bias was identified and removed.

Step 4: Identify connections across emerging themes	The researcher made connections between emerging themes across participants and organised them chronologically.
Step 5: Moving to the next participant	Step 5 is repeating the above four steps with all remaining participant transcripts.
Step 6: Looking for patterns across participants	The final step looks for patterns across participants in an attempt to bring the parts into a whole.

Three general steps merged the six steps previously outlined in Table 3.2 and were employed in the overall process, each of which consisted of additional internal steps. The three general steps are: 1) *Multiple Reading and Making Notes*, 2) *Transforming Notes into Emerging Themes*, and 3) *Seeking Relationships and Clustering Themes. Multiple Readings and Making Notes* (Step 1 and 2 in Table 3.2) of each transcript consisted of reading each transcript multiple times while listening to the audio recording of the interview to help the researcher become immersed in the data and become familiar with the content in detail. Notes were also taken about the researcher's specific thoughts, observations or reflections that were made during the interview. These included *identifying descriptive comments* articulated by the participant; the use of metaphors, repetition, context, and conceptual and interpretative comments. Table 3.3 below is part of step 2 of the 'Initial Noting' mentioned in Table 3.2:

Table 3.3

Example of Transcript Analysis Step 1 - Identifying Descriptive Comments

Steps of Analysis	Analysis of Descriptive Comments
Original Transcript: **Participant 1:** ...Um (pause), it's the jobs that I can relate to that does it. (Line 110) **Researcher:** So the jobs you can relate to are some of the most difficult things you have experienced? **Participant 1:** The ones I relate to, yeah.	
Step1: Descriptive Comments	Participant states that the jobs he can relate to are the most emotionally and psychologically difficult. Earlier in the interview he talked about how he can't relate to some people at jobs he attends. Why do the jobs he can relate to affect him more? Do the jobs he can't relate to actually have more impact on him and he's just avoiding them to help him cope.

Note: Table 3.3 outlines the descriptive step of the IPA process as per Smith Flowers and Larkin (2009, p. 84).

The above comments by the researcher helped identify the salient information and began forming thoughts and ideas about the possible options of what the participant could be saying. The next step begins to scrutinise each word to explore the reasons why the participant chose that particular word to describe their experience. Transforming Notes Into Emergent Themes was conducted by reviewing and analysing the notes, rather than the transcript itself. Focus was placed on summarising the notes and on identifying emerging themes and concepts of what the participant was expressing. Table 3.4 also outlines the linguistic scrutiny of *analysing salient words*, which is also part of 'Initial Noting' (step 2 of Table 3.2), Step 3 (*identifying emerging themes* (overall concepts), and step 4 (*development and connections across themes*).

Table 3.4

Example of Transcript Analysis Step 2 (Linguistic Scrutiny), Step 3 (Identifying Emerging Themes) and Step 4 (Connections Across Emergent Themes)

Original Transcript:

Participant 1: ...Um (pause), it's the jobs that I can relate to that does it. (Line 110)
Researcher: So the jobs you can relate to are some of the most difficult things you have experienced?
Participant: The ones I relate to, yeah.

Steps of Analysis	Analysis of Descriptive Comments
Step 2: Linguistic Scrutiny (Analysing salient words)	He uses the word, 'relate' in conjunction with 'difficult things.' He also paused when he said 'Um,' as if he has to think about it and isn't sure. Is he using 'Um' to buy some time to think about more to say or is he questioning what he has already said? (Participant 1: Line 110)
Step 3: Identifying Emerging Themes (Overall Concepts)	The concept that relating to a job elicits more empathy and compassion, which creates more emotional labour and effort becoming more stressful. The concept of emotional avoidance being emotionally laborious and stressful. The concept that if he can't, or doesn't want to relate, he may emotionally distance himself or discount any associated emotions to protect himself. The concept that because he does not relate he chooses to not let it affect him.
Step 4: Further Development of themes and beginning to identify 'Connections Across Emergent Themes'	Jobs he relates to are the most emotionally and psychologically difficult. Job type influences trauma impact. Emotional distancing appears to be a coping strategy that helps him cope (during jobs he doesn't relate to). Jobs involving children are difficult for most participants. Jobs where medics personally know patients are difficult. Jobs that participants have experienced themselves are more difficult to cope with.

Note: Table 3.4 as per Smith Flowers and Larkin (2009, pp. 88-92).

The steps of analysis in Table 3.4 above explore the multiple options and meanings of what the participant was trying to say. The researcher identified two themes that began to emerge from what the participant was saying, which was *job type* and *emotional distancing*. *Seeking Relationships and Clustering Themes* was conducted by looking for connections between the emerging themes and grouping the emerging themes together according to the similar themes identified. Themes were compiled for the entirety of each respective transcript before identifying connections between different participant transcripts. Themes that did not fit within the emerging themes, or which provided very little evidential base, were removed during this stage of analysis. After steps 2, 3 and 4 were complete, a list of major themes and associated sub-themes remained, each with short, relevant, participant quotes and respective line numbers in the transcript. Table 3.5 below outlines steps 5 (Identifying Connections among Emergent Themes) and step 6 (Looking for Patterns Across Participants):

Table 3.5

Example of Transcript Analysis Steps 5 (Moving to the Next Transcript) and 6 (Looking for Patterns Across Cases)

Steps of Analysis	Analysis of Descriptive Comments
Original Transcript: **Participant 1:** ...Um (pause), it's the jobs that I can relate to that does it. (Line 110) **Researcher:** So the jobs you can relate to are some of the most difficult things you have experienced? **Participant:** The ones I relate to, yeah.	
Step 5: Moving to the Next Transcript (Continuing to Identify Connections Across Emergent Themes)	Job type influences trauma impact and the jobs he can relate to the most are the most emotionally and psychologically difficult, which in turn can result in emotional distancing to cope with trauma impact. Emotional avoidance helps manage trauma impact. (Participant 1: Line 110)
Step 6: Looking for Patterns Across Participants	Participants 3, 5, 6, 7, 9, 10 and 11 all expressed similar challenges as Participant 1 regarding 'job type' and being able to relate to jobs (for similar reasons). Participant 1 related more when a patient's family was like his own family and Participant 3 was affected by emotionally relating, and having empathy for patients in situations the participant themself has been in.

Note: Table 3.5 shows steps 5 (Connections Across Themes) and 6 (Patterns Across Participants) of the IPA process as per Smith Flowers and Larkin (2009; pp. 100-101).

The above steps formed the primary structure of the analysis for each respective transcript. After all transcripts were read and individual transcripts analysed using the above process, a similar process was then carried out across all participant transcripts as outlined by Smith, Flowers and Larkins (2009). This final stage of the analysis process consisted of: 1) Clear identification of themes from each individual transcript independent of other transcripts, 2) Connecting and clustering of themes across all participant transcripts, 3) Arranging themes into a spreadsheet, 4) Identification of common themes across all

participants to help identify the convergence or divergence of data between individuals and collectively as a participant group, 5) Identification and interpretation of the overall meaning of participant themes and experience, and 6) Explanation of themes using participant quotes to help support, validate, and substantiate the results. In analysing participant data, it is also important to ensure some degree of validity and reliability. In qualitative research, this is referred to as 'trustworthiness.'

3.7 Trustworthiness

Validity in quantitative research is defined as a credible evaluation that helps determine whether or not the data, or process, measures what it is intended to measure (McCrae, Kurtz, Yamagata & Terracciano, 2011). There are similar concepts of credibility in qualitative research that are captured by the terms of trustworthiness, quality and rigor (Golafshani, 2003). Ary, et al. (2006) define trustworthiness as the credibility, dependability, and objectivity of the qualitative process that helps determine whether or not a researcher's observations, interpretations and conclusions appear credible. When qualitative judgement and processes are considered to be trustworthy, predictable conclusions can be drawn from the results and applied to practical situations and environments (Ferguson, Sanders, O'Hehir & James, 2000).

The trustworthiness of qualitative research can be objective if the analysis process attempts to eliminate any subjective views (Husserl, 1970). With IPA, more subjective views of interpretation can take place from both the participants perspective and the researcher due to the numerous potential variables, as long as the results are not generalised across the larger population (Leko, 2014). For example, the trustworthy evaluation of participant data is contingent upon the accuracy and consistency of self-reporting data that each participant provides. The ability of an individual to report their experience is influenced by the participant's own perception, degree of self-awareness, and by their ability to accurately articulate their experience (Hurley, 2013). Trustworthiness is also influenced by the researcher's interpretation of the participant's experience (Ernest, 2013). For these reasons, trustworthiness is subjective from each participant and influenced by the researcher's interpretation of the participants' experiences.

Four elements exist in the qualitative measurement of trustworthiness, which are; *credibility, transferability, confirmability* and *dependability.* Each of these will be outlined to help the reader understand the importance of trustworthiness in qualitative research and how each aspect relates to the current study. *Credibility* is described as the degree of confidence the researcher has demonstrated in the findings of the research study (Cope, 2014; Liao & Hitchcock, 2018). Cope (2014) suggests that the credibility of a qualitative study helps identify whether or not the results of the study can be deemed as correct and true. Triangulating the data from different sources (ie. multiple researchers) helps the researcher determine if the findings from a study are credible. For the current study, the research student's supervisors were part of the triangulation process that helped provide *credibility.* As supervisors were consulted with throughout the research study, they provided insights, perspectives and guidance about the data and interpretation thereof.

The trustworthy characteristic of *transferability* refers to the demonstration by the researcher of how applicable the findings of a research study are to other contexts (Ferrando, Hoogerwerf & Kadyrbaeva, 2019). For example police, firefighters and other emergency medical personnel outlined in the current study, who are also frequently exposed to trauma, may be affected in similar ways to veteran paramedics. Qualitative researchers can use similarities in trauma impact and resilience studies to identify commonalities across different professions but can also suggest hypotheses of application across different trauma affected professions. One could postulate that transferability of resilience and trauma management studies is possible between paramedics and police, firefighters and emergency medical personnel but more specific research between these cohorts would be needed to help explore these possibilities. The current study is a contribution of information toward the future *transferability* of effective trauma management and resilience development between paramedics and other professions.

Confirmability is the third element of trustworthiness and refers to an unbiased objectivity in the researcher findings (Tausch, 2008). Tausch (2008) suggests that *confirmability* is solely based on the participant data and not based on the researchers preconceived assumptions or any kind of bias personal opinions or agenda. In theory, without *confirmability,* researcher bias could skew the interpretation of participant data to the researchers' meaning rather than the participants.

To address any issues of *confirmability*, researchers can create an auditable documentation trail to help track the data analysis process that led to the rationale for the findings. This in turn helps verify that the findings accurately represent the participants' lived experience. The journaling and documentation process conducted in the current study helped provide the *confirmability* required for increased trustworthiness. The trustworthiness variable of *dependability* in qualitative research is defined as the consistency of using the same repeating evaluations to accurately measure conceptual information (Bryman, 2008). Bryman suggests that the numerous ways of interpreting data can greatly influence the *dependability* of the data and that *dependability* in qualitative research can be difficult to ensure because the differences in individual perception do not allow for consistency in participant responses. In application, *dependability* allows predictability of other researchers to conduct another study in the same way, which would yield similar results. Sufficient information in the methodology section of a qualitative study should be available so that if a researcher wants to replicate the study, they are likely to find similar results if they follow the same process. As previously outlined in the methodology section above, *dependability* was attempted by outlining a step-by-step process in the methodology section to help ensure a replicated study could be conducted. Dependability can also be established by conducting an inquiry audit to help determine if the research process and data analysis have been carried out in a way that is consistent with the findings and could be replicated by other researchers.

3.7.1 Emerging issues of trustworthiness.

Some critics of qualitative research suggest that epistemic chains of reasoning are subjective and lead to inaccurate judgements about how and why knowledge is acquired (Sticca, Goetz, Nett, Hubbard & Haag, 2017). Other studies suggest that inaccurate judgments may contribute to biased thinking, inaccurate assumptions, guesswork, or incorrect factual information (Audi, 1982; 2010). Along similar lines, other studies have suggested that self-reporting can be fundamentally flawed due to individual bias (Emmert, Carlock, Lizotte & Krohn, 2017). The accuracy of knowledge reported by participants can also be influenced by variations of mood at different times of reporting (Lee, Keil, Smith & Sarkar, 2017), the extent of an individual's emotional self-awareness (Shen & Morris, 2016) and their ability to articulate their personal experience and knowledge (Kortmann, 1987).

Due to the nature of interpretative research, it can be challenging to identify what participant data is credible. This is primarily due to the unique experience of each individual and how they interpret their experience (Lee, Keil, Smith & Sarkar, 2017). As previously mentioned, the one-way interpretation of meaning, or single hermeneutic (Giddens, 1987), is from the one-sided perspective of the individual having the experience. In using a double hermeneutic, the researchers interpretation of what the participant has reported to have experienced is an essential aspect of IPA (Giddens, 1987). Because the double hermeneutic involves the participants interpretation of what they are trying to communicate as well as the researchers interpretation of what they think the participant is trying to communicate, each of these interpretations can be vulnerable to flaws of misinterpretation, which in turn can lead to errors in results. In the case of the current paramedic study, the researcher's interpretation of what the participants reported to have experienced, makes it difficult to ensure the accuracy and credibility of working as a paramedic. It can be common for questions of trustworthiness to arise at different stages of an interpretative study, especially from one stage to the next of the analysis process (Lincoln, 1995).

To help compensate for any questions of trustworthiness and help ensure the credibility of the current study, two reflective listening measures were taken (Passmore, 2011; Rautalinko & Lisper, 2004). One of the first vulnerable aspects of credibility was in the gathering of participant data during the interview process. To help minimise the risk of inaccuracy about what was being said between the participant and researcher, the researcher used three very specific interview strategies. The first strategy used by the researcher was to regularly ask the participant clarifying questions, to help ensure that the participant information was correct (Passmore, 2011). The second strategy used by the researcher to help provide clarity of information was to ask participants for examples to help illustrate the point that they were trying to make. A third strategy used by the researcher was to summarise what the participant said, and ask if the summary was correct (Rautalinko & Lisper, 2004). This summarising confirmation process was repeated until the participant confirmed that the researcher's summary was correct. Using these three interview strategies helped to increase the *credibility* and *confirmability* of participant responses, and helped reduce potential margins of error in the interpretation of information, which in turn, helped to increase the likelihood of interpretative accuracy.

In summary, IPA (Smith, Flowers and Larkin, 2009) was identified as the best analytical approach to help make meaning of what the veteran paramedics experienced and help to answer the research questions. If thorough and consistent IPA steps are followed, IPA has been empirically identified as a *trustworthy* and *dependable* approach to analyse qualitative data, and a preferred approach by many qualitative researchers because it helps elicit a rich understanding of meaning and knowledge (Vicary, Young & Hicks, 2017). For this reason, IPA was used in the current study to investigate the veteran paramedics experience .

3.8 Limitations and Precautions

One potential limitation of the current study was sourcing the required number of participants who have worked as a paramedic for more than 15 years. Initially this was not an anticipated limitation, but it became an issue because there was very little response from paramedics, after the researcher provided the organisations with the information letter and overview of the research. This poor response could have been for reasons such as poor internal organisation communication networks, the limited number of paramedics the organisation was able to contact, paramedic mistrust in their organisation, or the organisation not advertising the research as requested. After one week of receiving no response from paramedics about the proposed research, the researcher came to a very important realisation that would help overcome this recruitment issue.

Having worked as an EMT in the USA, and somewhat understanding the dynamics within some organisations, as well as the paramedic culture of feeling more comfortable speaking about these issues with ‘one of their own,’ an adjustment was made to the advertising approach. A local paramedic support group was contacted, provided with the research advertisement material, asked to promote the research project, and asked to inform potential participants that the research was being conducted by a previous EMT. Paramedics quickly responded to the invitation to participate in the study, and ‘snowball recruiting’ was utilised at the end of each interview, by asking each participant to promote the research to veteran colleagues, and help identify more potential participants. Using these strategies, participants were quickly identified and data was gathered within a six week period. Another limitation of the current research was the gender balance of participants. As previously mentioned, eight participants were male and four participants were female. This

was identified as a potential limitation of the current study because females only represented one-third of the total number of participants, which was considered too small a number to identify whether or not any experiential differences existed between male and female participants.

3.9 Ethics Considerations

As part of the current study, the researcher was mindful of existing and potential ethical issues. The first was the potential risk of re-traumatisation for participants, as they were asked to recall past work-related traumatic experiences. Research suggests that when participants recall past difficulties, they can potentially 're-live' the associated traumatic emotions, resulting in re-traumatisation (Bartone, Roland, Picano & Williams, 2008). Participants were not asked to describe past traumatic events in detail, but were asked to generally recall trauma related experiences, and how they managed the emotional and psychological impact. To help address the risk of re-traumatisation for participants, the following two precautionary measures were implemented, prior to commencing each interview. First, participants were provided with a list of counsellors and encouraged to seek therapeutic support if they experienced any emotional distress as a result of the interviews. Second, participants were reminded that they could stop the interview at any time if they experienced any emotional or psychological discomfort. This was done to help emotionally and psychologically prepare participants (Nenonene, Gallagher, Kelly & Collopy, 2019) in the event that they became emotionally or psychologically compromised while recalling and discussing PTEs during the interview process. As a post-interview precaution, each participant received a follow up phone call approximately one month after their respective interviews. During the phone call participants were asked if they had any questions, concerns, or would like to receive any counselling support as a result of participating in the research interview. This was done to help ensure that no negative, latent response occurred from the interview process.

No participants reported any distress or re-traumatisation from participating in the research interviews. Participants were reminded that if they experienced an emotional or psychological distress as a result of the interview process, they should contact the researcher and counselling support could be arranged and provided without any cost to the participant. To date, no known negative impact has occurred as a result of participating in the research

interviews and in some instances, participants reported back to the researcher that their interview helped them identify and reconcile some past trauma related items. Another ethical consideration that was taken into account was the potential vicarious trauma to which the researcher might have been exposed. To help address this potential issue, all participant interviews were discussed at fortnightly supervision meetings with university supervisors, both of whom are also trained counsellors and registered psychologists. This allowed both the research student, and supervisors, to monitor and identify any potential vicarious trauma that the researcher might be experiencing. In addition, peer supervision sessions, with an external counsellor, were available if additional counselling support was required. No vicarious trauma was experienced by the researcher.

Regarding ethical aspects of data collection and data storage, all identifying information in documentation was removed to avoid compromising individual identities, organisations, and localities. All electronic data was stored on a password protected, portable flash drive and hard copies of research documentation were stored in a locked file cabinet in the School of Arts and Sciences at The University of Notre Dame Australia. After five years, the electronic research data and hard copies are due to be destroyed.

3.10 Summary

In summary, the qualitative, phenomenological and interpretative theoretical framework and approach used in the current study helped provide a solid foundation upon which the current study could be developed and completed. The selected methodology acquired the necessary in-depth data to help answer the research questions and address the aims of the current study. Given that the reader is now familiar with the methodological approach taken in the current study, the results of the current study will now be reported and discussed.

Chapter 4: Results Overview and Personal Theme

4.1 Introduction

This chapter presents the results from the current study and discusses how they help meet its aims and answer the research questions: 1) What is the veteran paramedic's experience managing work-related trauma; and 2) What contributes to the longevity of a veteran paramedics career? These questions helped guide the current study. The five themes identified by participants in the current study were: 1) Personal, 2) Work, 3) Organisational, 4) Training and 5) Trauma. Within each respective theme, sub-themes were identified, which helped provide clarity for each respective theme. Under sub-themes, additional topics are discussed and referred to as elements and sub-elements respectively. The remainder of the results and respective discussion will be presented in subsequent chapters as follows:

Chapter 4: Personal theme

Chapter 5: Work theme

Chapter 6: Organisational theme

Chapter 7: Training theme

Chapter 8: Trauma theme

The criteria for inclusion in each of the five respective sub-themes was contingent upon which theme a participant's comment was most closely related to. The criteria for categorising a sub-theme under the Personal theme consisted of salient aspects which were personal or unique to each participant and could not be shared by another participant; such as personality attributes, unique personal learning or what motivated each. The criteria for categorising a sub-theme under the Work theme consisted of salient functional aspects related to an individual's role or job description tasks working as a paramedic, much of which could be relatable by other paramedics working in the industry; such as attending a motor vehicle accident, resuscitating a patient or rushing from one critical incident to another. The criteria for categorising a sub-theme under the Organisational theme consisted of salient information directly related to the organisation in which each individual worked, such as the support they received from management or how their work roster was scheduled.

The criteria for categorising a sub-theme under the Training Theme consisted of salient information about each individual's own training as a student, as a trainer or about past, present or future aspects of paramedic training. The criteria for categorising a sub-theme under the Trauma theme consisted of any salient information associated with work-related physical trauma dealing with patients, any emotional or psychological impact individuals experienced themselves, or trauma related impact they observed in colleagues, patients or patient families. Trauma criteria for sub-themes also included how each individual managed the impact of potentially traumatic events (PTEs). Elements and sub-elements in each of these respective sub-themes consisted of more detailed information categorised under the same topics. For example, the Personal sub-theme of Emotional Intelligence includes the element of Trauma self-awareness and the sub-element of trauma impact. To help illustrate examples, for ease of reference, and to help provide an overview, relevant information is presented in Table 4.1. Table 4.1 also outlines the structure of how the discussion of results around the key themes is managed in subsequent sections.

Table 4.1

Theme Results With Respective Sub-Themes and Elements

Theme	Sub-Themes	Element
Personal Theme	Acceptance of outcomes	
	Compassion and empathy	
	Emotional Intelligence	
		Trauma self-awareness
		EI training
	Personality	
		Perception similarities
		Motivation
	Post Traumatic Growth	
Work Theme	Paramedic Culture	
		Stoic machoism
	Working Compromised	
Organisational Theme	Management	
	Policies and Procedures	
	Registration and Governance	
	Support	
		On the road
		Lack of support
		Job mngmnt./allocation
		Sense of community
	Trust	
		Culture of mistrust
		Trust in organisations
		Trust among paramedics
Training Theme	Learning trauma management early	
	Training type	
		Practical vs.theory based

(Continued on next page)

Table 4.1

Theme Results With Respective Sub-Themes and Elements

Theme	Sub-Themes	Element
Trauma Theme	Trauma Impact	
		All paramedics are affected
		PTSD symptoms
		Avoidance/suppression
		Cumulative and compounding
		Frequency, intensity & duration
		Job type
		Personal relating to jobs
		Vicarious trauma
		Paramedic suicides
	Trauma Management	
		Influence of EI and PTG
		Personal life trauma
		Down time
		Humour
		Job reviews
		Learning outlets early
		Multiple effective outlets
		Proactive trauma management
		Support networks
		Colleague support
		Work life balance

4.2 Personal Theme

The Personal theme is the first theme that will be reported. This theme is defined as variables which were unique to the personal experience of each individual participant. For example, a participant's level of emotional intelligence is unique to them, but others can have similar levels of self-awareness. Results suggest that Personal variables greatly contributed to the veteran paramedics ability to manage work-related trauma and influence their career longevity. A total of eight dominant sub-themes were identified within the Personal themeTo help provide context for the reader about the experience for veteran paramedics, and to provide an overall picture of the Personal sub-themes, all sub-themes and the number of participants referring to each respective theme are provided in Table 4.2.

Table 4.2

Personal Theme Sub-Themes

Personal Sub-Theme	No. of Participants
Acceptance of outcomes (Peace of mind)	12/12
Compassion/Empathy for others and gratitude	12/12
Emotional Intelligence (EI)	12/12
Humility	10/12
Satisfaction/ fulfilment from paramedic work	8/12
Personality attributes	12/12
Positive attitude/sense of self-worth/confidence	7/12
Post Traumatic Growth	12/12

As can be seen from Table 4.2, the Personal theme was identified as a main theme due to the large number of Personal variables identified and similar Personal related responses across participants. The number of participants in Table 4.2 refers to the number of participants who mentioned each respective sub-theme. Of the eight Personal sub-themes outlined in Table 4.2, five were the most dominant and common across all participants. These five sub-themes were also identified as the most influential sub-themes that contributed to trauma management for participants. The five Personal and common sub-themes across participants which will be discussed in detail are: *acceptance of outcomes, compassion and empathy for others, emotional intelligence (EI), personality attributes,* and *post traumatic growth*. Each of these sub-themes will now be discussed in detail.

4.2.1 Acceptance of outcomes.

The first Personal sub-theme, *acceptance of outcomes* refers to how participants chose to cognitively process traumatic events and the associated, unplanned negative outcomes. *Acceptance of outcomes* was predominantly associated with positive thinking and optimism. Negative thoughts, pessimism, and negative self-talk were identified as undermining factors that made it difficult for participants to accept patient outcomes, or their own imperfect patient care. Many participants expressed how they had been negative and

critical in the past and how counter-productive they found it to dwell on the negative aspects of trauma because it undermined their confidence, self-esteem, and compromised the quality of future patient care. Participants expressed how they had to re-train themselves to think positively and recognise improvements they could make in the future, and to avoid dwelling on mistakes or negative patient outcomes. The participant examples below help illustrate these points:

> *Participant 1: I think there's no point in dwelling on it (negative patient outcomes), she had a great run, getting to 97 years old. (Line 550)*

> *Participant 2: ...I hear people (colleagues) doubting what they did and I think, mate, you did the best with what you had at the time… (Line 354)*

Participant 2 was willing to accept the impact that trauma had on him, but was also very aware that he consciously chose whether or not to let it affect him, as demonstrated in the following statement:

> *Participant 2: ...don't think for a minute that I'm not impacted by what happens...anyone that says they're not impacted would be lying...it's a bit like what Pop said...it's not what we do in life, but what we do after that, that makes us who we are. Yeah, well if you make a mistake, you make a mistake but it's what we do after that, that proves who we are…(Line 461)*

Participant 2 was also very aware of the long term negative impact and the implications on future patient care:

> *Participant 2: ...you don't have time for regrets because that next person (patient) is right around the corner; it could be an hour away, it could be three days away…you know what I mean? You've gotta be ready for that, mentally, physically, and emotionally... (Line 566)*

Other participants redirected their negative thoughts by consciously taking time out to celebrate success and achievements, regardless of how small they may have been. Participant 3 has learned by experience that the frequency of negative experiences can take their toll if they don't stop to celebrate the 'wins' from time to time:

> *Participant 3: ...you have to celebrate wins, and that's what people (paramedics and general public) don't understand… I need to enjoy the really good wins because you do the mundane routine stuff and then you've got the really bad stuff. So everyone wallows in the bad and I just think, nah, take five minutes to enjoy the wins. (Line 331)*

Participant 3 also recognised the negative impact from carrying trauma for long periods of time and how it undermined their confidence because they began questioning themself about past jobs:

> *Participant 3: Don't carry it (trauma impact). Don't second guess yourself all the time, that's the biggest thing… some of the obstacles (emotional) we have to climb over are pretty big, so don't second guess yourself… don't say I should have done this or that, just do what you need to do and don't carry it (trauma)... (Line 499)*

Participants 3 and 5 below also recognised that making mistakes is part of the growth and learning process and that self-loathing or self-criticisms is vital to avoid if they are to minimise trauma impact and accept patient outcomes:

> *Participant 3: ...don't dwell on it, you know, it's gonna happen (trauma impact), that's a given… if you make an error, then acknowledge it, don't try to deny it or make excuses… Carry it to learn from, but don't carry it to bog you down...when you do get bogged, it hurts. (Line 511)*

Participant 5: I don't think working with trauma has taken anything away from me… I just don't worry about stuff anymore, you know? Stuff happens and that's all there is to it… (Line 190)

Participant 5 recognised the difference between how much more they had been affected earlier in their career, compared to how little they are affected now. The trauma impact and inability to accept outcomes in the past, interfered with their personal and family life:

Participant 5: ...it (trauma) doesn't affect me as much now… people are dying, people are getting hurt… it's just life. (Line 235) It wasn't always that way, no, I would think about the patient's family… how they were being affected and it would get to me… now I don't really think about it. It's just another job... (Line 237)

Participant 8 recalled past experiences when they hadn't accepted outcomes, which compromised their ability to be optimistic and think positively. They realised how negative and self-critical they had become:

Participant 8: ...all those little things (negative) had built up… I looked for the negatives in every single job… I said to myself, that is what you did wrong… if you were a better paramedic, you could have done it this way… it became this sort of self-fulfilling prophecy of, "ok, you did that wrong, bad job, bad paramedic"… (Line 306)... I was only remembering the patients I couldn't save… I decided I'm not going to beat up on myself anymore… there is good in everything we do. (Line 335)

As Participant 8 suggests, *acceptance of outcomes* was a contributing factor to effective trauma management for veteran paramedics and their career longevity. *Compassion and empathy for others* was also found to be a sub-theme under the Personal main theme.

4.2.2 Compassion and empathy for others.

Results found that *compassion and empathy for others* was the second Personal variable that participants developed throughout their career which contributed to trauma management and career longevity. Participants were aware of their increased ability to relate to others by developing more empathy, to be more tolerant of situations that annoyed them in the past, and the need for future students to have *compassion and empathy for others* to help them cope with the trauma that they will be exposed to:

> *Participant 1: I think when I was younger… I didn't have the same kind of compassion and empathy towards other people (pause) and I think I was more concerned about doing the job better... (Line 484)...I've gotten better at relating to most people. Yeah, so there's more empathy there and I can see more about what's going on there now... (Line 547)*

> *Participant 4: ..it helps that I've got more empathy...I get frustrated at stupid little things, big things don't bother me that much… I just think to myself, "I could be struggling so much more." (Line 285)*

Participants readily identified the attributes of compassion and empathy toward others as very important elements because it helped them more easily reconcile the impact that trauma had on them:

> *Participant 2: ...compassion is one of the biggest things you need to have. But you also have to be in control, you can't let your own emotions get involved with what's happening while treating patients (Line 1040).*

> *Participant 6: ...paramedics need to be incredibly empathetic people to begin with...on many occasions, we don't even need to treat anyone (medically)... sometimes we just need to be someone patients can talk to… to be a friendly face and hold their hand if needed. (Line 852)*

4.2.3 Emotional intelligence (EI).

In addition to *compassion and empathy for others* as very important Personal sub-themes, *emotional intelligence* (*EI*) was also identified as the third very influential Personal sub-theme by veteran paramedics. Two elements of *EI* were identified among participants which influenced veteran paramedics, *trauma self-awareness* and *general self-awareness.* Veteran paramedics also demonstrated and expressed additional aspects of *EI* development and *EI* related insights, in their own words, but these were not identified as *EI* elements significant enough to report.

4.2.3.1 Trauma self-awareness and general self-awareness.

Participants identified three sub-elements of *trauma self-awareness* which helped them. The three sub-elements of *trauma self-awareness* were: *impact awareness*, *outlet awareness*, and *vulnerability awareness*. None of these *trauma self-awareness* sub-elements were identified independently of one another. As part of *trauma self-awareness*, results suggest that participants had learned to recognise *impact awareness* as an *EI trauma awareness* element. *Impact awareness* is described by the researcher in the current study as the conscious awareness that a traumatic event has had an impact on the individual and whether or not they have become emotionally, psychologically, or physically compromised and unable to effectively function in the same way that they functioned prior to the traumatic event. *Impact awareness* is not only the ability to recognise that a traumatic event has negatively affected the participant, but also includes the self-awareness to know the extent of impact the traumatic event has had, and whether or not they need to address the impact immediately, or are capable of temporarily 'packing it away' to be dealt with it at a later time. The following participant quotes provide several examples of *impact awareness:*

Participant 2: ...I do get upset about jobs, absolutely… I wouldn't be in here if I didn't (in the interview). I've had good ways of managing tough jobs so when I fall, there's always been a net to catch me. There's my counsellor, and I've got a great partner at home who I love dearly... (Line 526)... they helped me cope cause that was probably the toughest job I ever did... (Line 1315)

Participant 6: ...both my crew partner and I were close to the edge (emotionally) to start with from an earlier job that day and we certainly didn't need to be in somebody else's raw emotion. So at the end of that job, we rang up and said, "we're off the road… we don't want to see anyone and we'll sort it out but we're not currently available" Then we talked about it and we realised why we were so affected...we had to figure it out and get our heads straight (emotionally; Line 465).

Participants 2: ...if you've had a huge day where you've had one or two fatalities and that night you have to go to your mum and dad's 50th wedding anniversary,… Do you go there and get smashed (drunk) and make an idiot out of yourself and start crying halfway through the night? No, you sort it out …I'm not invincible, I have my bad days…(Line 1401)

Participant 1: I did take extra time NOT to avoid looking at the dead child… it disturbed me... I don't want to back away from that because the next time I see it, I don't want to be disturbed. (Line 218)

Through trial and error, participants learned to develop *impact awareness* over many years of practice. Participants learned which jobs negatively affected them more than others — which jobs required proactive mitigation and which jobs did not. Once participants learned self-awareness about trauma impact and their compromised condition, they learned

over time, which coping strategies were helpful to mitigate the trauma impact. This type of *self-awareness* was identified as *outlet awareness* by the researcher. *Outlet awareness* was identified as an *EI trauma awareness* sub-element and defined as, cognisance that a traumatic event has negatively affected them to the point of feeling compromised, requiring effective trauma management coping strategies, or *outlets*. *Outlet awareness* consists of two parts: 1) the awareness to know that pro-active mitigation strategies are required to help effectively cope with the trauma impact, and 2) knowing which types of *outlets* are required to address different types of trauma impact. Results suggest that veteran paramedics demonstrated both of the above elements of *outlet awareness.* All paramedic participants in the current study not only clearly expressed what they did to help mitigate trauma impact, but also outlined which effective strategies they had learned to use at different times. Participant 12 was well aware of what helped them to effectively manage trauma when affected by a difficult job:

> *Participant 12: I talk it out with family, friends, colleagues… I like going for a swim....walking along the beach... having a glass of wine... but not drink the whole bottle... (Line 83)... I don't try to get drunk to forget… that never works… I think it helps to make sure you take time out and spend time doing things you enjoy. (Line 87)*

Participant 12 was not only aware of what worked for them, but was also aware of what "never works" (drinking to forget). Participant 12 suggests that they were aware of unhealthy coping strategies they used earlier in their career but had learned healthier coping strategies over time and with practice. Participant 11 expressed some similar beneficial outlets but also suggested that they have many outlets, the most beneficial of which is "talking it out" with their spouse:

> *Participant 11: Always talking it out (with my spouse), I'm not one for really internalising things a great deal. That's probably been my best tool. (outlet; Line 238)*

The majority of the time that a participant identified a traumatic work-related event, they identified accompanying coping *outlets* they used to help mitigate trauma impact. After participants identified *impact awareness,* they immediately expressed the associated *outlets* they used to mitigate the trauma impact. *Emotional Intelligence* studies suggest that this level of *outlet awareness* is associated with resilience and studies support the notion that it is a common byproduct of high levels of *EI* (Bulathwatta, Witruk & Reschke, 2017; McCrimmon, Climie & Huynh, 2018). Many participants expressed how their *EI* developed as they learned to effectively manage trauma impact and acknowledged how naïve and emotionally unaware they were about it early in their careers, especially compared to their current, more developed level of *EI*:

> *Participant 1: I wouldn't say I was an emotionally intelligent man...I could look at things and work it out logically, but while in the moment I'm not emotionally the smartest person... it's gotta be my wife that's helped me learn to recognise it because I've spent many years with her, listening to the psychological stuff that she's doing and it's just rubbed off on me...it's helped protect my head...I was very unaware of those things earlier in my career (Line 295)...*

Results also suggest that participant *outlet awareness* developed over time as their *EI* developed. Participants outlined how they learned the different ways that trauma affected them, how psychologically compromised they became over time if trauma remained unresolved, and which outlets (coping strategies) worked best after different types of trauma impact. All veteran paramedics demonstrated some degree of conscious, *vulnerability awareness,* to self-evaluate the extent of trauma impact on them and help determine how vulnerable they were. *Vulnerability awareness*, together with some degree of *outlet awareness*, were both identified as contributing factors to their trauma management strategies and career longevity.

Vulnerability awareness is defined by the author of the current study as the *self-awareness* to know whether or not the trauma *outlets* have sufficiently reduced the trauma impact, to the point that the traumatised individual is no longer emotionally, psychologically, or physiologically compromised. For paramedic participants, *vulnerability*

awareness helped them recognise whether or not they were still in a compromised condition before attending subsequent jobs. Veteran paramedics in the current study frequently expressed that they were not willing to place themself, future patients, and/or the organisation at risk by continuing to attend jobs while compromised. Throughout their career, participants had accepted that working in an emotional, psychological, and physiologically compromised condition was part of the paramedic culture. Many participants expressed how they were trained to work in a perpetually compromised state and they had learned to accept trauma impact as "part of the job."

While *vulnerability awareness* may appear to be the last of the three types of *trauma self-awareness* demonstrated by veteran paramedics, *vulnerability awareness* was also identified as an antecedent to *impact awareness* and the first step of the repeating cycle. For example, many participants identified when they knew that a traumatic job had affected them, how it affected them (or would affect them later), which outlets were needed for that particular type of trauma impact, how long they needed to use the outlets to help mitigate the trauma impact. They also expressed how they recognised when they were no longer compromised and could take another job without any lasting detrimental effects:

> *Participant 8: Then that trauma just builds on the next job we go to...then you get a big job and you're already vulnerable, so it just hammers you even harder and your partners sitting there going la, la la, la la and you think...he's rock solid isn't he, and I'm just putty. (Line 745)*

> *Participant 6: ...at the end of the second job, we rang the dispatcher and said, "we're off the road, I'll let you know when we're back, but we don't want another job yet, we'll sort it but we're not available"...once we had gotten ourselves together, we went back out on the road. You have to be assertive and say, we're not ready to do anything else, we're going to get our heads together first...We are not doing any more jobs until we deal with this. (Line 207)*

As Participants 6 and 8 above explain, participants retrospectively identified times when they knew they were continuing to work in a compromised condition. Results suggest that these three types of *trauma self-awareness* were developed from years of veteran paramedic experience and practice, often resulting from a process of trial and error. Identifying these factors of *trauma self- awareness* elicited many questions for the researcher. If *EI* in the area of *trauma self-awareness* could be included in student curriculums and offered to paramedics currently in the field, could this help address the many difficulties that paramedics experience?

It would be interesting to investigate how much these factors might contribute to how veteran paramedics effectively manage work-related trauma and whether they contribute to the career longevity of veteran paramedics. Insights might also posit implications for the type of training offered to other high risk professions experiencing trauma impact. These and many similar issues need to be explored further, but the results suggest that *EI trauma self-awareness* is an important contributing factor to the effective trauma management for veteran paramedics and contributes to their career longevity.

General EI Self-Awareness.

A general degree of *EI self-awareness* was identified as a contributing factor to effective trauma management. Results suggest that a *general EI self-awareness* was identified within veteran paramedics on the three different levels of *emotional self-awareness, psychological (cognitive) self-awareness,* and *physiological self-awareness*. These three types of *self-awareness* were related to *impact awareness* but were more specifically related to the participants general introspective process and overall

self-awareness about their own feelings (*emotional)*, their own cognition (*psychological*), and recognising the physical (*physiological)* symptoms across all areas of their life, including work-related trauma. Veteran participants frequently demonstrated *emotional self-awareness* by identifying when they were emotionally compromised in any way, from either personal life difficulties or work-related issues. The difference between *emotional self-awareness* and *trauma impact awareness* is that *emotional self-awareness* is not isolated to work-related trauma but was more generalised across all areas of the participants life. Results from veteran participants found that being exposed to work-related trauma was a contributing factor to *EI* and its associated *self-awareness*, much of which developed over time as a byproduct of *EI trauma awareness.* Participants reported that with each subsequent year of service they became increasingly more aware of the emotional impact that traumatic events had on them:

> *Participant 4: ...the emotional impact that things used to have on me has changed… I don't think they impact me anywhere near as much as they used to. (Line 242)*

The statement by Participant 4 suggests a few different things. First, they are aware that trauma emotionally affects them. Second, they learned the difference between how trauma used to affect them compared to how it affects them now. Third, they had become aware of the decrease in emotional trauma impact over time. As the following statement suggests, Participant 4 also realised retrospectively, how much more emotionally unprepared they were earlier in their career, and how they wish they had their current emotional insight early in their career:

> *Participant 4: If only I had the insight that I have now, earlier in my career, to realise that I wasn't used to it, that working as a paramedic was going to be a shock, that I was going to dwell on the trauma, you know? (Line 289)*

Now, years later as a veteran paramedic and through personal experience, Participant 4 is conscious of their increased emotional awareness and of the detrimental consequences of suppressing trauma related emotion, as the following statement illustrates:

> *Participant 4: ...I don't think I shut trauma out now, I think it out, but I don't shut it out. I may not have talked to many people about it, but I don't shove it in a box and hide it in a corner anymore. I deliberately think about it and process it. (Line 296)*

The comments by Participants 4 and 1 below, demonstrate how they learned the detrimental impact of suppressing trauma related emotions and identified their past naive misconception that they wouldn't be emotionally affected by trauma. They now realise that it isn't a matter of IF paramedics will be affected, it is a matter of WHEN paramedics will be affected and to what extent, as they illustrate in the statements below:

> *Participant 4: ...you WILL be affected, there's nothing you can really do to stop being affected, it's how you manage your emotions that matters. (Line 320)*

> *Participant 1: ...after that (child died)... I took the rest of the shift off just because I knew there was something there affecting me and I needed to give it space. It's one of those jobs where no one is going to question you because they know it was a job involving a dead kid and no one is going to question why you went home early. (Line 202)*

The above participants demonstrated their *emotional self-awareness* by recognising they were emotionally and psychologically compromised. More specifically, participant 1 was very aware of how much the infant death affected them and immediately took action by going home early. Participant 1 not only recognised that they were too emotionally compromised to continue working, but was also aware that they needed to go home early to help mitigate the trauma impact and minimise any future risk to himself or others by continuing to work that shift. Before going home however, Participant 1 also knew what

they needed and was proactive about reconciling the trauma impact so that they would not be affected by similar jobs in the future:

> *Participant 1: So I hung around a bit and looked at the kid and sort of soaked it in a bit so the next time I see a dead kid I will cope better… the next time I see a dead kid I don't want to go to pieces ya know, I want to be able to get around that one better in the future. (Line 229)*

The large majority of veteran paramedics in the current study expressed similar examples of emotional awareness, with slight, individual variations between them. Participant 1 expressed that their *emotional self-awareness* did not come naturally, but was learned on the job throughout their career. Only retrospectively did they recognise how unaware they were and how limited their *EI self-awareness* had been earlier in their career. The emotional and psychological awareness of Participant 1 was quite limited before working as a paramedic and they expressed how much more aware they have become from working with trauma:

> *Participant 1: When I first got in the job it was like someone stripped a veneer off my life… I liked seeing the reality of what was really there… I mean in a way, it's like taking the pill in the matrix you know?...You can continue to live your happy lie or you can see life for what it really is and I'm glad I can see it for what it really is, but with that, there's a loss of that kind of numbing, isolating comfort that was there previously. (Line 325-350)*

In the above statement, Participant 1 was aware of how paramedic work had helped open their eyes to the reality of trauma and the associated difficulties compared to the 'sheltered' life they lived before becoming a paramedic. Their positive attitude toward learning suggests that they were not carrying the trauma impact, but had effectively worked through the trauma impact to date, which suggests that learned strategies also contributed to the longevity of their career. Some veterans expressed how they sometimes stopped in the middle of patient treatment to help themselves emotionally 'regroup' and get their emotions

back under control, which in turn helped ensure clinical efficacy. Participant 2 describes taking a step back from the patient to re-assess where they were emotionally and cognitively because they had become aware of their increasingly compromised state:

> *Participant 2: I think you gotta be honest with yourself… sometimes we just have to step away when the emotions kick in...Sometimes we just have to take a moment to collect ourselves, you know? (Line 390)*

The above examples were biopsies of dozens of similar statements outlining the *emotional self-awareness* that helped veteran paramedics effectively manage work-related trauma and contributed to their career longevity. The next *EI self-awareness* element to discuss is *psychological self-awareness*. *Psychological self-awareness* is defined as a holistic, self-aware, cognitive ability to process and analyse, one's own thoughts, feelings, and behaviours, taking environmental factors into consideration (Richards, Campenni & Muse-Burke, 2010). Many of the same descriptive characteristics of *psychological self-awareness* are also captured in various definitions of *EI* with an extra focus on the cognitive awareness of one's own thoughts. *Psychological self-awareness* was found to be independent of the trauma related variables previously outlined (*trauma impact awareness, outlet awareness and vulnerability awareness*) and is more of a type of *general self-awareness* of one's own thoughts. Participants frequently demonstrated a general sense of *psychological self-awareness*, independent of work-related trauma, but due to the content of participant interviews, many of the examples used were related to work. It is important to note that the *psychological self-awareness* identified, was independent of the trauma that participants worked with. An example of this is demonstrated below by Participant 4, expressing *self-awareness* about the need to take 'time out' to cognitively process the trauma, and "get it straight in their head:"

> *Participant 4: I just make sure that I take the time to get it (trauma impact) straight in my head because the first 20 minutes after a bad job, I talk a lot, blah, blah, chat, chat chat...it takes a while to come back. I just make sure I take that time to come down from the stress and talk to people about the job. (Line 132)*

Participant 4 was very aware that their rate of speech increases after a difficult job and that they have a tendency to talk with greater frequency and intensity. Participant 4 was also cognisant of why they chat, and that they need to talk as a physical and emotional outlet. Participant 12 explains their *psychological self-awareness* and the holistic approach of putting everything into context, even though the trauma was the catalyst to this cognitive processing:

> *Participant 12: I take time out to think about things more than anything, it makes me appreciate and enjoy my own family, I have a good life. Even if the kids are annoying you or whatever, you still think, well, they're happy and they're ok so I'm ok. I just appreciate them so much more… I don't take them for granted, that they'll always be there. (Line 96)*

Another participant described their *psychological awareness* as seeing beyond an injury and trauma by looking at the larger picture of what the patient was experiencing. In the following statement, Participant 1 became more *psychologically self-aware* of the 'larger picture' beyond patient care and demonstrated a holistic perspective which was related to an unfortunate event for a patient. Participant 1 acknowledges that the job affected them, but they were not traumatised by it because of the change in how they cognitively processed it:

> *Participant 1: When I started (as a paramedic)...I would try to work out how she's fractured her bones and why... and what treatment she needs, I wouldn't see the whole picture. Now I see the whole picture of the person living in this house…that maintaining her independence is who she is. I didn't see the psychological side of that person until later in my career... (Line 538)*

Participant 1 realised the 'whole picture' of empathy, and was psychologically aware of numerous aspects of the situation and why it affected them in the way it did. They now better understand what the injury means for the patient and the reason why something may have affected them. This same increased understanding was also found to contribute to participant's increased ability to manage the effects of trauma, which in turn also helped them more effectively manage stress in other aspects of their life. Participant 1 suggests that because their psychological awareness was more limited earlier in their career, traumatic jobs had more of a negative impact than they have now. These results also suggest that the *psychological self-awareness* of paramedics increased over time and throughout their career.

Physiological self-awareness was the last *general EI self-awareness* sub-element that veteran participants identified in the current study. Results suggest that veteran paramedics were very introspective about work-related trauma and how it affected them physiologically. Introspection is defined as the conscious process of looking within oneself, to examine, or observe one's own thoughts, feelings, beliefs, and cognitive processes (Costal, 2006). Participants frequently described an introspective process in the examination of their own thoughts about a traumatic event, to help determine conclusions about the impact of the trauma. Introspection appeared to be synonymous with the gradual development of *EI* throughout the participants' career, suggesting that veteran paramedics had become aware of, and developed, the introspective process that helped reconcile the emotional, psychological and physical impact of trauma. Over time, this introspective process appeared to help participants recognise how their body responded to trauma, which in turn helped them develop *physiological self-awareness.*

Physiological (psychosomatic) self-awareness is described by the current researcher as the physical symptoms that participants were able to identify in their body from the emotional and/or psychological stress from work-related trauma. For example, a participant may feel nauseous and discomfort in their stomach after a traumatic job and recognise the physical feeling before they recognise the emotional impact. Results suggest that participants could readily identify the physiological, or psychosomatic symptoms they experienced following a traumatic event. This type of physical feedback that the body transmits is also sometimes referred to as Biofeedback (Roberts, 1986). Biofeedback is defined as the physical symptoms, or 'feedback,' that the body responds to from cognitive or emotional stimuli (Austad & Gendron, 2018). Participants reported numerous instances when they could feel a physiological reaction to a traumatic job, which in turn helped them recognise that the traumatic event emotionally and/or psychologically affected them. For example, Participant 6 below describes the physical symptoms induced by the trauma impact from a job:

> *Participant 6: ...you're immediately thrust onto the next job and if the next job is a very low priority job then you've gone from high excitement and physical and psychological demand to a real downer (emotionally), and that causes so many fatigue problems when you get a high priority job and you come straight down to a low priority job. (Line 420)*

In the above example, Participant 6 was aware of the physical adrenaline rush and the resulting fatigue, as well as the emotional impact. Many participants expressed how unaware they were of this early in their career of these types of symptoms. Participants appeared to be very aware of the physical fatigue that accompanied traumatic jobs, and the associated emotional fatigue they experienced preparing for, during, and following traumatic jobs. This type of physical impact has many similarities to adrenaline fatigue (Wright-Reid, 2018), emotional labour (Zhao, Li & Shields, 2019) and emotion fatigue (Sydenham, Beardwood & Rimes, 2017).

Throughout their career, participants were found to become increasingly more self-aware of the physiological impact of working with trauma. Participants frequently expressed how their increased *self-awareness* had become beneficial to their effective

functioning and trauma management, both of which were identified as having physiological implications. Other participants, such as Participant 6 below, expressed how the emotional and psychological impact of trauma created a physiological response if it remained unresolved and they did not have sufficient time to help reconcile the trauma:

> *Participant 6: ...if I don't process it that day, or don't get some semblance of order to it (the trauma), then I will become ill, you know physically ill or whatever, and then I'll be off work for a little bit longer so you might as well give me the hour now because if the bosses say, "No", I'm going home anyway so give me an hour, and I'll give you the rest of the day. If you don't give me that hour, then I'm off for the day. (Line 630)*

Participants also experienced obvious physical reactions to the trauma environment, such as those associated with smells and visual cues, as shown in the example Participant 7 demonstrates below:

> *Participant 7: ...you don't see the smell in the training pictures and I remember puking my lungs out sometimes… in the middle of summer in a confined space with rotting flesh and it was 40 (degrees) in there… I gagged and physically I did 'things,' I had to run outside to get a breath of fresh air and then run back in again. (Line 1351)*

Some physical and emotional connections are more symbolic, but participants still recognised the importance of the physical and emotional connection. Participants below outline a couple of these connections:

> *Participant 3: After that bad job, I went home, my wife was there, I just walked in, left my suit in the garage, dumped all my gear, clothes, boots, the lot, walked straight in and she's just like, what are you doing home and why have you dumped your clothes there? I'm just dumping everything that happened today right there. (Line 185)*

> *Participant 11: ...It's a silly thing, but I take my boots off when I get into the car. That's my sign (physical) that I'm switched off from work (emotionally)...it's just a little physical thing I do. (Line 199)*

As levels of *EI* increased throughout their careers, many participants expressed how setting personal boundaries of self-care helped them manage the trauma impact. Some participants expressed that the more *EI self-awareness* they developed, the more they retrospectively realised the emotional, psychological and physically compromised conditions they were working under. As participant *self-awareness* increased, participants began setting better boundaries against unreasonable expectations imposed by themselves or their organisations. The statement below by Participant 3 helps illustrate the *self-awareness*, required boundary, and unwillingness for them to continue working in an emotional and psychologically compromised condition:

> *Participant 3: ...yeah, I'm a bit blasé...a bit harsh that I don't care about what the organisation thinks if I need time out after a difficult job. If I need time to debrief, if I need time to talk things through, then, yeah, sorry, but I'll take the time… I'll force them to give it up because they have to. (Line 296)*

The development of *EI self-awareness* competencies was often unrecognised by participants at the time of the original trauma impact. The large majority of participants only recognised their increased *self-awareness*, associated behaviours, and coping strategies, when looking back over their careers. Without formal psychometric measurements and processes, it is difficult to accurately measure the level of participant *EI,* but this is not the purpose of the current study and would be recommended for future studies. The identification of *EI* variables as a contributing factor to effective trauma management and career longevity does suggest however, that over time, participants became increasingly more aware of trauma impact, how to manage it, and how to discern what was needed when feeling emotionally, psychologically and physically compromised.

Participant 3 expressed how important *EI* was as it helped them recognise when they had been compromised from a traumatic job and how they would not have coped without their *EI* awareness:

> *Participant 3: ...if you're too far clueless and unaware (of trauma impact) you're gonna kill somebody, that's what I think anyway. (Line 72) After a recent difficult job, I just rang up and said, I'm done man, I hung up and walked out. That was me done for the day, I was dead silent for a long time... (Line 113) I used to do a lot of sports and stuff like that to cope… I just find I don't need to work stuff out as much as I used to, I just need to have time to think things through, so my awareness and coping strategies work well. (Line 128)*

If high levels of *EI* contributed to improved trauma management in veteran paramedics, then future research to explore correlations between high levels of *EI* and implications to help resolve, reduce, or even prevent emotional and psychological difficulties that paramedics face could be very advantageous. Future research in the development of *EI* in paramedics could also contribute toward finding solutions to help address the global increase of paramedic suicides, reduce attrition rates, reduce the risk of trauma impact, and help improve training curriculums. If high *EI* could contribute to more effective trauma management then one could assume that low *EI* could contribute to negative implications. Only future studies in paramedic *EI* could help find answers to explore such topics. Many participants expressed their awareness of low EI negative implications. For example, many comments were made about paramedics' lack of education about trauma exposure and trauma impact. Some participants have directly and indirectly expressed the detrimental impact of having lower *EI* earlier in their careers.

What these findings indirectly suggest is that low *EI self-awareness* about trauma impact and management can result in detrimental consequences and can compromise a paramedic's emotional and psychological well-being because unresolved, compounding and accumulated trauma impact compromises them. It was expressed by veteran paramedics that many younger paramedics carry their trauma impact because they are either unaware or unwilling to address the impact as it occurred. Many participants expressed the belief that

this is due to junior paramedics' lack of work experience and lack of trauma management experience, resulting in low level *EI self-awareness* to know that trauma impact must be addressed or it accumulates and has detrimental effects later. Participants expressed concerns that the new university-based paramedic training structure reduces the practical 'on the road' component, which they believe results in limited opportunities for veteran paramedics to access, educate, teach, model, and train new students about trauma impact and trauma management.

Veteran participants stated that the foundations of their *EI self-awareness* originated from the practical skills training they received from their trainers, when they were new paramedics students, but this will be discussed in more detail later. Results suggest that trauma suppression was identified as a contributing factor to low *EI*, but was also identified as a training strategy to help avoid the interference of emotional shock and help ensure effective clinical functioning. Trauma suppression was identified as a common element of paramedic training to help paramedics avoid being emotionally compromised to the point that they are not able to clinically function. For example, a new, young paramedic graduate in their early 20's with little life experience, may be more likely to suppress trauma impact from all the new trauma experiences to which they will be exposed. Such suppression could then contribute to lower *EI*, lower *self-awareness*, and is less likely to develop the trauma management strategies of veteran paramedics. While trauma suppression training may be advantageous to temporarily suppress trauma impact in order to effectively treat patients in the short term, veteran participants reported that very little training, if any, was provided when they were students and suggest this to still be the same in many current training programs. Participants suggested that paramedics need help understanding the necessity to 'unpack' any suppressed trauma impact from patient trauma. Veteran paramedics reported how not "unpacking" trauma suppression early in their careers began to erode their ability to cope with daily stresses, infiltrated their personal life, affected their family relationships, and compromised their overall emotional and psychological stability. Participants reported how the *cumulative and compounding effects* of paramedic trauma suppression over a number of years was a significant contributing factor which led to symptoms of depression, anxiety, PTSD, and they believe, greatly contributes to the increased risk of paramedic suicides.

Participants suggested that the stress they experienced from carrying work-related trauma also contributed to excessive self-criticism, which undermined their sense of belonging, control, competency, confidence, and self-esteem. Participants also expressed the numerous risks that paramedic trauma suppression has for patients, suggesting that it compromises the medical treatment that patients receive. Veterans expressed that carrying suppressed trauma can cloud paramedic judgement about how to provide accurate treatment, can compromise their cognitive functioning and decision making processes, can result in poor judgement leading to life threatening mistakes, and can increase the overall risk of human error. Many participants also stated that suppressing trauma can contribute to an increased propensity for cynicism, pessimism and fatalistic thinking, which can result in increased feelings of depression, anxiety, and ultimately culminate in suicidal thoughts, attempts, or successful suicide. The following participant quotes illustrate this point:

> *Participant 3: Very few colleagues that I know will go see a psychologist, psychiatrist or whatever, to work through their trauma, that's why we end up with dead paramedics and suicides… because we all know that no matter what, if that four letter word of PTSD is ever mentioned, then our career is over. (Line 743)*

The comment by Participant 3 above, expresses why some paramedics may avoid seeking therapeutic support for trauma, but also outlines the potential damage and sometimes fatal consequences of paramedics suppressing trauma. Participant 3 continues detailing the implication of suppressing trauma and associated negative thinking:

> *Participant 3: ...we have to take the negative thinking away from the trauma. People say, oh man, the things that you see, they're so terrible. Yeah, they are, but if I keep telling myself that it's a terrible thing… if I constantly take it on as, oh my goodness, that's gonna affect me, then it's gonna affect me, and I've talked myself into it... (Line 916)*

> *Participant 3: When I try to stop feeling, or avoid the feelings from a difficult job, it makes it worse. In the past I tried to stop feeling the pain of that patient and felt like something was wrong with me… I had broken the connection with my feelings…I felt like I was broken because I wasn't sitting in the corner sobbing like a baby... (Line 961)*

> *Participant 3: How can I sit here and eat roast dinner with my family and pretend to not be affected when only three hours ago I watched a child die? Once you start shutting off your emotions, you're on a one-way road to nowhere. You are going to disappear into nothing… It doesn't mean we're broken (expressing our feelings), it just means we're a lot stronger than we realise and that we're working through the trauma. (Line 975)*

The *EI self-awareness* demonstrated by the above participant quotes could lead to questions about whether or not *EI* can be used to help develop programs which could help identify vulnerabilities and help strengthen the paramedic population. If so, one could also query about whether or not low *EI*, which could contribute to trauma suppression and be a contributing factor in the difficulties that paramedics experience and if low *EI,* contributes to the high attrition rates, burnout, or even paramedic suicides. Further paramedic research measuring *EI* would be needed to help answer questions such as these. These *EI* results also identified that participants believe some kind of *EI training for paramedics* to be important for trauma management and career longevity.

4.2.3.2 EI training for paramedics.

To help address this issue, many participants suggested the need for all paramedics to develop, or to receive training in *EI*, so that they can all increase their self-aware of the emotional, psychological, and physiological impact of work-related trauma. Participants proposed that *EI* training could help mitigate trauma impact, more effectively manage work-related trauma, and help reduce paramedic attrition rates. As discussed in the review of existing literature, Simha-Alpern's study (2007) supported the notion that *EI* development

was beneficial by helping World Trade Center victims increase EI and thereby break through therapeutic treatment limitations and resolve repressed trauma (Simha-Alpern, 2007). If the development of *EI* in paramedics could help resolve the trauma impact that they experience, then one could hypothesise that adding *EI* training to student curriculums and training programs could potentially benefit paramedics in the future. Generally speaking, participants expressed that in their experience and observations very little, if any, *EI* training was provided to paramedic students or to qualified paramedics in the field.

Overall, participants strongly suggested that *EI* training deficits exist in the field of paramedicine. Participants suggested that they, and the general paramedic population, were either unaware that anything could be done about it, generally accepted the *EI* deficit, or have accepted negative trauma impact as part of the paramedic culture and that they are "left to manage it" themselves. Hypothetically speaking, if increasing the *EI* amongst paramedics could help mitigate the work-related trauma impact they experience, one could also hypothesise that it could contribute toward addressing the global issues that paramedics experience. The implications of increased *EI* could potentially help address the associated symptoms of depression, anxiety, PTSD and the increasing incidence of suicide. *Emotional Intelligence* and its associated element represents one part of a problem and potential solution, another Personal sub-theme identified is *personality*.

4.2.4 Personality.

Personality was the fourth Personal sub-theme result identified. There were many personality related attributes and characteristics identified in the current study even though no psychometric instruments were used to identify and measure personality. Participants suggested that paramedics need to be a specific personality type:

> *Participant 1: Finding the right mentor can be a complex thing...you have to choose the right personality type that matches the student. (Line 682)*

> *Participant 10: I think personality is a large component of coping with hard jobs. (Line 88)*

Some of the same personality attributes were identified across all participants. The common dominant personality elements identified in the current study were *perception similarities* (Perception; Kahler, 1982) and *motivation for paramedic work* (Openness; Costa & McCrae, 2010). The *perception similarities* were associated with traditional and strong beliefs, values, ethics and morals. Among the personality attributes identified in the current study were: high levels of commitment and beliefs associated with helping others, contributing to the improvement of society, perseverance through difficulties, and dedication to the job. Examples of traditional values and beliefs frequently demonstrated by participants were; honesty, kindness, integrity, loyalty, and commitment. Participant 6 clearly outlines and describes themself in the following statement:

> *Participant 6: I'm honest, caring, kind and loyal… the personality characteristics that I find important are the ones I believe that I have, so I'm happy with who I am. (Line 347)*

The common personality attributes and beliefs identified across all participants were consistent with the Process Communication Model personality type of *persister* (Kahler, 1982). As both Kahler (1982) and the name suggests, *persister* personality attributes tend to be persistent through difficulties and a belief system that tends to demonstrate strong dedication and commitment to things they strongly believe in, such as: contributing to society, the welfare of animals, nature preservation, their family, their job, and/or helping others. *Persister* attributes strongly align with traditional beliefs, and persisters perceive situations in very similar ways to how many of the veteran participants' in the current study. Participants in the current study described how they effectively managed work-related trauma, how they perceived trauma situations, and cognitively processed information, the majority of which was consistent with *persister* personality attributes. According to Kahler's personality model (1982), and other well established personality models and theories (Costa & McCrae, 2010), personality attributes can influence individual beliefs and behaviours. Kahler's *persister,* value laden belief system, exemplifies why participants 'persist' through difficult jobs, 'stick it out,' and refuse to 'give up.' Kahelr suggests that the personality attributes synonymous with *persister* personality attributes are; respect, honesty, dignity, honor, loyalty, dedication and commitment to a cause they strongly believe in.

Similar to the dedication and beliefs of these personality attributes, studies among nurses explored resilience strategies that helped them cope with stress more effectively (Shin, Kim & Ji, 2018). The results from the study conducted by Shin and associates found similarities in coping strategies in areas of dedication and commitment with the current veteran paramedic study. While the different types of resilience were not the focus of the current paramedic study, the important similarity to note with the Shin and associates 2018 study is that participants were committed and dedicated to their jobs enough to persevere through the work-related challenges they experienced. There are many other similarities that exist between the perseverance, commitment and dedication of participants in Shin's study and *persister* personality attributes that veteran paramedics in the current study demonstrated. Many of the same *persister*-like attributes (Kahler, 1982) identified, were at the core of what veteran paramedics expressed as fundamental beliefs. The participants appeared to be driven by a desire to fulfil a higher purpose to 'serve humanity,' save lives,' and to 'make a difference' in society.

Due to this dominant and repeating common belief system across participants, the original motivation to pursue a paramedic career appeared to be 'hard wired' into the foundations of their beliefs and personality attributes (Cost & McCrae, 2010; Kahler, 1982), and could suggest that some personality types are intrinsically attracted to the paramedic profession. For example, the comments below from Participant 4 identify the specific and traditional personality attributes of respect and dignity, which align with some unique PCM personality theories (Kahler, 1982):

> *Participant 4: Respect and dignity are very important to me... going back to the morgue (for repeated training)... it just felt like it was undignified, unnecessary and disrespectful. (Line 485)*

Whilst these findings were not psychometrically assessed through a formal process in the current study, many personality characteristics and beliefs were similar across all participants and do not appear to be coincidental. For example, many participants attributed their career longevity and trauma management to their dedication and conviction to religious beliefs. The large majority of participants expressed how their strong religious beliefs and convictions were the foundation of their effective trauma management.

These participants stated that they couldn't have worked for as long as they have without it. The statement below by Participant 7 demonstrates how religious conviction was a primary coping strategy:

> *Participant 7: ...my faith is probably the biggest one (coping strategy)... going to church gives you kind of purpose in life... (Line 541) ...people who don't believe in God struggle with death more… they battle more or they appear to battle more. So yeah, my faith and being involved in church and things like that does definitely give me purpose. (Line 465)*

The above statement associated with religious conviction is a small pericope of numerous similar statements from different participants, suggesting that a belief in some form of deity greatly contributed to how they effectively managed work-related trauma. Whilst religious conviction and beliefs were found to help mitigate elements of trauma impact for several participants, these same value-laden beliefs also contributed to some of the trauma impact that veteran paramedics experienced. Veteran participants demonstrated strong opinions and beliefs on moral and ethical issues, such as jobs that conflicted with what they believed to be appropriate. Participant 1 expressed how 'wrong' they believed it was for a mother to sleep with her child while intoxicated, suggesting that it was irresponsible, and it violated the participant's beliefs about appropriate parenting:

> *Participant 1: ...a drunk mum who rolled over and laid on top of her kid during the night who was about five month old... that was like the wrongest thing I've ever seen... it was just so wrong (Line 192)*

The comment by Participant 1 above suggests that the violation of their beliefs contributed to trauma impact from that job. However, these same belief systems contributed to their perseverance and persistence:

> *Participant 1: ....when you see something that horribly wrong… you go through it, confront it, and then deal with it. (Line 257)*

Participant 1 was emotionally traumatised after attending a job that confronted their moral and ethical beliefs that an intoxicated parent should never fall asleep with their infant child, in order to avoid the risk of inadvertently contributing to their own child's death. Effectively, the participant perceived the child's death as needless, and even preventable, if the mother had adhered to the same beliefs and governing rules by which the paramedic lived. The veteran paramedic's response suggests an internal conflict between their violated beliefs and how the child died, which appeared to create more of a traumatic impact than if the child had died under responsible parental care. As previously mentioned, the same veteran beliefs which were violated and contributed to the trauma impact, also helped effectively mitigate work-related trauma for participants. Fortunately, the benefits of the veteran's beliefs far outweighed any negative impact that contributed to trauma impact, such as the example of Participant 2:

> *Participant 2: ...the next person is right around the corner... (Line 376) ...you don't have time to dwell on it. (Line 575) On one job, a guy was driving drunk and he killed a family of four. The front end of his car was gone and he was still trying to drive it. The law says I have to treat this guy with respect, with dignity, and medically, so I do. My heart wants to rip his heart out and eat it, cause he's just killed a family… but if I hold on to that, it just produces anger and I can't live with that. (Line 621)*

In the above quote, strong, value-laden beliefs permeate the participant's statement in several parts, and for different reasons. The participant made a conscious choice to not carry the anger and trauma impact from one traumatic event to the next, so that they wouldn't let it influence their treatment of the next patient in need. Participant 2 expressed how the violation of morals and beliefs by a drunk driver being so intoxicated that he still thought he was driving after the accident and totally unaware that he had just killed an innocent family, was very difficult to reconcile. The strong personal values and ethical beliefs of Participant 2 enabled this veteran paramedic to comply with the laws, professional code of conduct, and his own ethical beliefs. As a result, the participant acquiesced to provide the required medical treatment even though the drunk man had violated their values, ethics and beliefs. Participant 2 was aware that their internal conflict had learned how to reconcile it.

4.2.4.1 Perception similarities.

Many paramedic participants expressed very similar perceptions about working with trauma, trauma impact, and how they reconciled trauma in their mind. These similarities of perception seemed to be connected to their personality attributes. As studies suggest (Costa & McCrae, 2010; Kahler, 1982), personality attributes can greatly influence an individual's perception of the world around them. For example, numerous participants readily accepted the belief that working with trauma and being affected by trauma, is "just part of the job:"

> *Participant 12: Not everyone is running off and killing themselves because of the stress from work, I mean,what kind of job do you not get stressed from?... I think every job has it's stress.. (Line 489) ...All stress just depends on how you deal with it. (Line 497)*

> *Participant 8: You go to people's emergencies every single day. You go to their worst times so it is going to affect you, and that's the big thing. You don't get there and they go, yeah, come on in and have a cup of tea, have a piece of cake. It's everybody's worst moment, so why wouldn't that affect you? If it didn't affect you, that would be a bigger problem. (Line 410)*

In addition to personality-based perception about trauma work, trauma impact and reconciling trauma, the original motivations for becoming a paramedic were also identified by participants as a variable influenced by a personality-based perception. As previously mentioned, it is possible that an individual may be motivated (Kahler, 1982), or influenced by some personality attributes, such as "Openness' to a wide range of different experiences (Cost & McCrae, 2010; McCrae & Costa, 1983), such as those experienced by paramedics on a regular basis. It may be that certain personality attributes naturally attract, or motivate some individuals toward specific professions because of their perceptual view of the world around them. Paramedic work is no exception to this theory as Kahler (1982) suggests that numerous 'helping professions' are driven by the same *persister,* value laden belief system such as nursing and military service.

4.2.4.2 Motivation for paramedic work.

All participants expressed a similar internal interest and motivation to become a paramedic. Participants expressed strong beliefs in making a positive contribution toward society. Again, this aligns with Kahler's (1982) *persister* personality attributes because of their dedication and conviction towards helping those who are in need. For example, some paramedic organisations have the motto, "In the Service of Humanity," printed on their ambulances. Whether deliberate or not, this statement and job description is somewhat tailored to attract *persister* personality types, who are driven to make a difference and contribute to society in a positive way. According to Kahler, some professions attract people with *persister* personality characteristics due to their desire to make a difference in society by protecting the community through police service or to serve their country through military service:

> *Participant 6: ...it's a fabulous job, I still love it and I still like being able to make a difference. (Line 1111)*

Whilst most participants were motivated by helping others, some were also motivated by, and found fulfillment in, the diversity and unpredictability of the different jobs they attended:

> *Participant 1: ...how well someone copes depends on why someone's gotten into the job in the first place. I think I had the advantage because I realised that there was just something wrong with the nine to five office life... (Line 564) ...it's not living… I don't want to do that every day...it's the diversity of this job that I like, I don't have a clue what my next ambulance job is that I'm going out to next, I like that. (Line 585)*

While Participant 1 did not specify that their motivation was to help others, they did suggest that an individual's ability to cope with work stress was influenced by the reason an individual wanted to become a paramedic in the first place. Participant 1 also suggested that the diversity of the different jobs they attend also motivates them, and helps meet a personal need that a "nine to five" office job could not offer.

Participant 1 suggested that the motivation for their decision to work as a paramedic was influenced by being outside of an office, having diversity in their work, and the enjoyment they find in the unpredictability of jobs they attend. These job-related aspects appeared to contribute to job satisfaction for Participant 1 and were influential factors in their management of trauma and career longevity. Another participant reminisced about watching their dad help paramedics with a car accident in front of his house when he was a young boy, which contributed to his desire to become a paramedic:

> *Participant 2: Dad said, "well, he was gone (passenger had died) and we managed to get him back so now the ambulance can look after him and everything else he needs." When the patient recovered, they came back to my home to thank my dad... I thought, yeah, this is for me, this is what I want to do. (Line 22)*

It appears that Participant 2 suggested they were motivated to become a paramedic by a belief or desire to help others in times of need, making a contribution to society, and being acknowledged for their efforts. They recognised how influential this childhood experience was for them and their whole family, resulting in a decision to pursue paramedicine as a future career. These statements by Participants 1 and 2 suggest that job satisfaction, helping others, and receiving recognition may have been motivating factors that contributed to how they managed working with patient trauma and so the longevity of their career. Many participants expressed how intertwined their work as a paramedic is, with their sense of identity, as the following participants statements demonstrate:

> *Participant 2: I think working as a medic has made me a better person, it's made me who I am... I'm proud of what I do. I'm **very** proud of what I do. (Line 685)*

> *Participant 6: I'm not sure who I would be or what I would be if I hadn't been a paramedic, it's kind of hard to imagine. I'm happy with who I am… I have the personality characteristics that I find important. (Line 853)*

Participant 4: I don't know what I would have been like if I hadn't been doing what I've been doing for the past 30 years. (Line 245)

These results suggest that personality attributes are an important variable to consider in the belief-driven perseverance and commitment to saving lives. *Personality* was identified by participants as a Personal theme that greatly contributed to the veteran paramedics' ability to effectively manage work-related trauma and to the longevity of their career. For participants in the current paramedic study, the personal fulfillment and gratification of helping others and saving lives was compensation for the impact of working with trauma. These results also suggest that congruence between participant beliefs and their role in saving lives, appeared to be the reward that created sufficient desire to persist through the challenges and trauma. Theoretically, the internal payoff, or reward, of personal fulfilment and gratification of saving lives was sufficient compensation to help the veteran paramedics in this study to continue working. Most participants in the current study expressed that they would continue working as a paramedic until the age of retirement. The next Personal sub-theme that was found to influence effective trauma management and career longevity was *Post Traumatic Growth*.

4.2.5 Post traumatic growth.

Post Traumatic Growth (*PTG*) was the fifth and final sub-theme, under the Personal theme, which will be reported and discussed. *Post Traumatic Growth* was referred to by participants as personal growth which took place as a result of emotionally working through traumatic events. Participants expressed examples of *PTG* by stating that they; 1) felt more resilient from regularly working through trauma, 2) believed they were a better person from working as a paramedic (more patient, relaxed, compassionate and less reactive), 3) expressed more gratitude/improved life perspective, 4) experienced personal and professional growth, 5) were less affected over time by repeating trauma, 6) reconciled trauma more effectively, 8.) actively sought learning from trauma experiences, 9) experienced decreases in PTSD symptoms over time, 10) believed their *PTG* began after 10 years on the job, 11) increased self-worth/contentment/enriched life, 12) believed general life stress was easier to manage, 13) learned to minimise trauma impact, 14) recognised

growth that came from commitment to helping patients and perseverance through difficulties. Participants frequently referred to variables associated with *PTG* in their interviews and how persisting through the emotional and psychological trauma impact helped them become better people. Participants regularly expressed that the personal growth and development they experienced was a byproduct of the emotional and psychological struggle of working **through** the trauma impact that they experienced throughout their career. Participants stated that even though the trauma impact was difficult to manage and work through, the resulting *PTG* they experienced was invaluable and they had grown as a person. In addition, the following participant quotes are consistent with many aspects of the PTG model previously discussed (Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018):

> *Participant 10: I'm a better, stronger person having worked as a paramedic... (Line 206) …it's contributed hugely… it's made me resilient in work life... (Line 210) ...It definitely gives you confidence as a paramedic, that's for sure. (Line 216)*

> *Participant 3: I've grown from being the person I was before. It's influenced me quite a lot… It's made me a lot more open with people that I know and love. It's just helped me to be me. I think I'm a good person and seeing that, I don't have to fake anything, so yeah. I've grown, I think it's made me stand up for myself more and made me a lot more responsible for everything that I say… I have more influence in my life... (Line 443)... I deal with stress a lot easier, I don't take so much on board (emotionally), I just do what I need to do to get the job done. (Line 455)*

> *Participant 2: I think working with trauma has made me a better person, it's made me who I am. It's made me, me... and I'm proud of that... (Line 721) ...I think it's made me a stronger person too... (Line 815)*

These participant responses not only suggest that they experienced some degree of *PTG*, but participant 10, a veteran of 25 years, specified that they don't believe their resilience begin to develop until **after** they had worked for over 10 years:

> *Participant 10: I don't think my resilience peaked until like, 10 years...no, even longer ...I'm not even sure that it has peaked. (Line 179)*

Participant 10 identified the post-10 year mark as the point when their resilience began to peak and then questions whether or not their resilience has even peaked. These results conflict with the 5-year resilience peak proposed by past resilience studies (Beaton, 2006). It is unknown what accounts for the discrepancies between these two resilience peaks but these findings raise several additional questions. For example, it would be interesting to explore if differences exist in resilience peak time frames, between veteran paramedics and the rest of the paramedic population. Beaton's 2006 study found that after the five-year resilience peak, resilience dramatically decreased resulting in various negative outcomes. It is unknown why Participant 10's resilience was reported to have conservatively peaked after ten years of service since they have been working as a paramedic for more than 25 years. This suggests that after their resilience peaked, the sharp decline in resilience did not occur in the same way as Beaton's participants (2006). Participant 10 questioned the peaking of their resilience and expressed the likelihood that their resilience is continuing to increase and states that they can continue to work as a paramedic until retirement age, which is more than 20 additional years:

> *Researcher: So you feel like your resilience is still increasing?*
>
> *Participant 10: Yeah, I'm going to be here for another (pause), until I'm 65 (laughing; Line 200).*

Participant 10 had no reservations about continuing their paramedic work and showed no signs of wanting to leave the profession. It is unknown what accounts for these findings as many other participants made similar sentiments of future career longevity. Why do some paramedics last a maximum of five years and some veteran paramedics who have been working for more than 25 years, have such optimism for many more years of

work? As these results suggest, there appears to be an element of personal growth that facilitates a level of resilience unique to veteran paramedics. If this is the case then it would be important to understand how veteran paramedics developed *PTG* and what specific strategies they used to develop it. In addition, it would also be helpful to know if veteran paramedics were cognisant of the *PTG* that was taking place to determine whether or not *PTG* could be taught or strategically developed.

If trauma resilience were to only begin to peak after 10 years for veteran paramedics, then it could be beneficial to also understand the difference between veteran paramedics and other paramedic resilience that peaks after five years of work (Streb, Haller & Michael, 2014) and identify what happens for veteran paramedics between 5 and 10 years of their work life. Learning the answers to these and many other questions could be very beneficial in better understanding *PTG* and the development of resilience for paramedics. Do these findings suggest that medics who leave the profession before 10 years, could have developed the same level of resilience as veteran paramedics if they had continued working in the profession? Further research is needed to help answer questions such as these, but many participants in the current study implied that their resilience increased with time, and as a by-product of working through work-related trauma. If this perspective is correct and trauma resilience begins to develop after the 10 year mark, then paramedics who work less than 10 years may be leaving the profession with at least five years of unreconciled trauma, and in an emotional and psychologically compromised condition. The large majority of veteran paramedics expressed how much their work has enriched their lives and how much they had personally grown from working as a paramedic. This personal growth, or *PTG*, experienced by participants was valued as a positive, but difficult, learning process for which the large majority expressed gratitude. Veterans expressed how much stronger they had become by working through the work-related trauma which they had experienced over many years. Participants also expressed how the *PTG* they experienced helped increase their gratitude, love, and appreciation for their family and relationships. Results suggest that *PTG* has facilitated veteran paramedics in valuing their close relationships and developing a deep respect for the frailty of human life. The outcome of *PTG* was also identified by participants as a contributing factor which helped them to be more accepting of negative outcomes in their personal life, especially when compared to negative outcomes on the job.

Participants suggested that their personal growth contributed to an increase in patience, compassion and resilience:

> *Participant 7: I think it's made me a better person. Um, in many ways, it's made me extremely grateful. I've worked with the poorest of poor and with the most violent people under the sun and I'm just grateful for what I have because I don't need much... (Line 743) ...it's enriched my life. (Line 750)*

> *Participant 10: …being a paramedic has affected me, I'm different to how other people cope. Friends who aren't paramedics aren't as resilient, it's certainly made me resilient. I'm much more capable, stronger and more direct. (Line 222)*

> *Participant 3: I think I'm a good person and I don't have to fake being someone I'm not. I've grown a lot and think it makes you stand up and makes you a lot more responsible for everything that you say you'll do... (Line 411) ...I'm happy to off load all the emotional rubbish now whereas before I would carry it around, asking myself, "what if I had done this?" I used to self-doubt more and be more judgemental of others. (Line 438)*

Interestingly, the results associated with veteran resilience suggest that *PTG* and *EI-self-awareness* were crucial elements often synonymous with one another. When participants reported an increase in *self-awareness* (*EI*), they also reported an increase in *PTG*, suggesting a positive relationship correlation. In other words, as *EI self-awareness* increased, participants also reported a degree of personal growth, suggesting *PTG*. Participants acknowledged their lack of awareness of *PTG* at the time, and that they only became aware of *PTG* factors retrospectively. Due to the qualitative nature of the current paramedic study, the correlation between *EI* and *PTG* cannot be confirmed, but results from the current study hypothesise that a positive correlation could exist. Future quantitative studies are recommended to help explore the *EI-PTG* relationship and identify correlations between these variables. Future studies are needed to explore the relationship between, and

development of, both *EI* and *PTG* to substantiate these two Personal themes and verify the potential benefit and effective trauma management of paramedics and other professions. These results suggest that *PTG* contributed to veteran paramedics' effective trauma management and the longevity of their career. These results also suggest that further investigation could be advantageous to help confirm the relationship between effective trauma management, *PTG* and career longevity.

4.3 Summary

In summary, results suggest that veteran paramedics' effective trauma management and career longevity was influenced by the Personal sub-themes of; *accepting outcomes*, *compassion and empathy*, *EI*, *Personality attributes,* and *PTG*, each with their respective elements and sub-elements. Each of the Personal themes, sub-themes and elements contributed to the aims of the current study and helped answer the research questions of how veteran paramedics manage work-related trauma and what contributes to their career longevity but it is unsure to what extent each variable contributed. Future research is required to investigate these variables and help provide a greater understanding about how, and to what extent, each facet contributes to veterans trauma management and career longevity. The next theme identified by veteran paramedics is the paramedic theme of *Work*.

Chapter 5: Work Theme

5.1 Introduction

The Work theme outlines variables that participants identified as influential factors contributing to their career longevity and their ability to effectively manage work-related trauma. The Work theme was defined by veteran paramedics as any work-related variables, which are part of the paramedic's job and influenced the participants ability to manage work-related trauma and contributed to their career longevity. For example, working with trauma is an inevitable "part of the job" that cannot be avoided. Generally speaking, Work sub-themes were accepted as part of the paramedic profession. Six total Work related sub-themes were identified by participants. Two of the six sub-themes were referred to the most, as well as the most common themes across the majority of participants. All Work related sub-themes identified by participants have been provided in Table 5.1 to help the reader understand all variables that contributed to the veteran paramedics experiences and to help provide context to the sub-themes that will be discussed.

Table 5.1

Work Sub-Themes

Work Sub-Themes	No. of Participants
High Risk/Pressure Profession	6/12
Job Management	5/12
Paramedic Culture	7/12
Suicides	3/12
Working Compromised	9/12
Work-life Balance	3/12

The large majority of total Work sub-themes identified by participants were reported to undermine their effective trauma management. Not all of these undermining sub-themes will be discussed since they were not dominant results and were not common factors across all participants. The researcher suggests that further investigations into undermining factors of paramedic resilience would be beneficial in future studies to help gain an increased understanding of variables that influence paramedic attrition rates among the general paramedic population. Of the above six Work sub-themes identified, the two most salient and contributing factors to effective trauma management for participants were *paramedic culture* and *working compromised.*

5.2 Paramedic Culture

Paramedic culture will be the first Work sub-theme to be discussed and was defined by participants as, 'the way things are,' 'part of the job,' and aspects of the job that cannot be directly controlled by paramedics within the profession. One of the most influential sub-themes associated with *paramedic culture* was the general awareness and acceptance that all paramedics are emotionally and psychologically affected by the trauma they experience on a daily basis:

> *Participant 7: ...because it is that person's suffering, and that's just what we do. We try not to let it affect us too much so we can help other patients, you know? (Line 1385)*

Another aspect of *paramedic culture*, which contributed to veteran resilience, was defined by the researcher as *stoic machoism*. Stoicism is defined as someone's ability to endure emotional, psychological, or physical pain or hardship without showing their feelings or complaining (Wilmoth, 2017). Machoism is defined as the external display of emotional and physical toughness, or being unaffected by difficulties (Titunik, 2008). Titunik's summarised definition of macho-ism will be used to highlight the origins of the paramedic culture, rather than the traditional macho-ism definition of showing aggressive pride in one's masculinity (Hancock, 2012).

The term *stoic machoism* is being used in relation to the paramedic culture because it combines the suppression of feelings and verbal expression, with the machoistic drive to be seen as tough, both of which accurately defines this supporting, yet undermining component of *paramedic culture.* The *paramedic culture* of *stoic machoism* appears to have been carried from its military origins, where the paramedic profession was born (Pfutsch, 2018). The first paramedics were Red Cross volunteers who served with the military and helped clear the dead and wounded soldiers from the fields of combat. These volunteer roles were originally a transport service from the battlefield to the doctors tent, to receive urgent, life saving medical treatment. Over time, this transport role quickly evolved into the provision of limited medical treatment on the battlefield, in an effort to help alleviate soldier pain, and help provide life sustaining support for otherwise fatal injuries. Studies suggest that the culture of *machoism* is a strong culture within the defense forces (Titunik, 2008), so it is reasonable to believe that the same 'macho' culture could still be strong within the paramedic profession. The following participant examples help illustrate the *stoic machoism* which appears to be deeply embedded within the paramedic culture:

> *Participant 1: ...A lot of medics could do better at not packing things away (emotions)... I think that happened to a lot more of the 'old boys' (older generation medics)...that 'man's man' sort of culture...I think that's why it gets bottled up as well. (Line 644)*

> *Participant 6: ...ambo's are people who want to be autonomous, want to be in control, want to feel that they are completely indestructible and a whole lot of other things… that they can go into scenes and fix as much as they can and whatever. (Line 501)*

Participant 1 refers to the 'man's man' culture, or machoism, and associates this machoism with the unhealthy paramedic culture of suppressing, or bottling up emotions. After Participant 1 suggests that the older generation of paramedics have a 'macho' mind set, they contrast with some older generation paramedics who are good at reconciling trauma impact. Other participants expressed very similar sentiments:

> *Participant 3: Just concentrate more on off-loading stuff... learn skills about how to be emotional and admitting it... no one wants to stand around and carry on about their emotions if they think it's not manly…(Line 702) ...we have to stop thinking that feeling and expressing our emotions is a negative thing... It doesn't mean we're broken if we cry after attending a difficult job, it just means we're a lot stronger than we realise and that we ARE working through stuff. (Line 953-959)*

Participant 3 above comments on how paramedics need to learn to identify and admit the emotions that come from trauma impact and stop hiding them because of their 'macho' beliefs. This comment also indirectly refers to the importance of learning *EI self-awareness* but emphasises the importance of overcoming these *stoic machoistic* beliefs and admitting to being emotionally affected by trauma. Participant 2 expresses a *paramedic culture* of *stoic machoism* by suggesting that many paramedics believe that showing emotion is seen as emotional weakness, or that they are emotionally broken in some way. Participant 4 below, expresses their experience with *stoic machoism* culture in their career:

> *Participant 4: …the culture was different. I was new and I remember vividly, reaching out to the training officer and saying, some of these jobs are really bad, and he just laughed and walked off… (Line 253) ...You just sort of get through it don't you?... you just go, oh well, that's what you sign up for, you can't really be an ambulance officer and take some relatively good money and reasonably good working hours and complain when things like that happen... (Line 285) ...If I only had the insight when I was younger to realise that I wasn't used to it (the trauma), that it was going to be a shock, and I was going to think about it. (Line 289)*

Participant 4 identifies the difference between the *stoic machoism* culture they experienced early in their career and how they have learned to manage trauma differently now. Retrospectively, Participant 4 also realised how they had initially embraced the cultural belief that paramedics just have to accept the trauma impact and pretend that it

doesn't affect them, especially after being laughed at by a training officer from whom they were trained by, and sought help and support from. Participant 6 below expressed an example of this *stoic machoism* culture*:*

> *Participant 6: ...there's still a very big stigma that people think, oh, if I put my hand up that I need to see a psychologist, then my job prospects are gone because the bosses think, oh, you can't deal with it. It doesn't mean you can't deal with it, it just means that at* ***that*** *time you've been overwhelmed with a whole bunch of circumstances that have 'dented your cage' but you can get the cage fixed and then you're perfectly strong again. (Line 995)*

Participants reported that acceptance and 'pushing through' the trauma impact from work-related trauma was a prominent part of *paramedic culture*, and identified this as a contributing factor to trauma suppression. These results suggest that veteran paramedics were aware, on some level, of the *stoic machoism* culture within the paramedic profession, and demonstrated this in the above quotes, in three different ways. First, that *stoic machoism* in the paramedic culture exists, and that they were cognisant of the associated negative implications of trauma impact suppression. Second, that there was some level of awareness to rebel against this cultural variable, for their own emotional and psychological well-being. Third, that if they were to continue to work as paramedics, they needed to develop their own effective coping strategies, despite the strong paramedic culture to suppress trauma impact:

> *Participant 8: ...medics need to understand that we're humans, we're not flippin movie star firefighters or paramedics bursting through flames without masks or whatever… it's not like that. The more human we are, the better we are for everybody. (Line 850)*

As Participant 8 suggests, part of the *stoic machoism paramedic culture* is the unrealistic expectation to be superhuman, and immune to emotional and psychological impact from work-related trauma. *Stoic machoism* was identified as both a contributing and undermining factor of short-term trauma management for veteran paramedics. Results suggest that the *stoic machoism* of emotional suppression was a contributing factor to effective trauma management when it was used to stay focused on providing medical treatment. Participants expressed that some degree of temporary trauma suppression is helpful, and even necessary, to avoid being emotionally and psychologically compromised in order to competently provide critical medical treatment so patient lives won't be compromised. The training that participants received as students was identified as a key reinforcing factor which contributed to the *stoic machoism paramedic culture,* which may also explain why participants believe it still exists among the paramedic community today.

The large majority of participants expressed how their own training as students included instruction about the importance of suppressing their emotions in trauma situations so they wouldn't interfere with their ability to provide medical treatment. If they arrived at the scene of a bad motor vehicle accident, the emotional impact from the trauma could make them freeze or go into a state of debilitating surprise, especially if they had never been exposed to a similar scene before. Many participants expressed how they had been trained to 'not freeze' because 'freezing' on the scene of a traumatic event could put the safety of themselves, their colleagues, and patients at risk. Participants also recalled how they were informed that emotional reactivity to a trauma scene can incapacitate them to the point of losing crucial, life saving seconds or even minutes, making the difference between life and death for paramedics and patients alike. Participants expressed that the suppression of trauma impact must only be temporary so that the life saving medical care that patients require can be provided, but must be consciously 'unpacked' soon after the traumatic event has concluded. Veterans stated that this process of learning effective emotional suppression takes time and conscious effort to master, as new graduates become desensitised to the trauma over the first few years of their paramedic career. As the above examples demonstrate, the *paramedic culture* of *stoic machoism* has positive benefits, but was also identified as a potentially significant undermining factor to effective trauma management. Participants also suggested that the *stoic machoism* culture within paramedicine is a

metaphorical 'Achilles heel' for paramedics, which greatly contributes to the trauma impact that they experience, if the trauma suppression is not later reconciled.

Veteran paramedics expressed that they were trained to effectively suppress the trauma impact in order to provide treatment to patients, but emphasised that they were not educated about the extent of trauma impact, about the importance of 'unpacking' the emotional and psychological impact after the trauma, or even how to effectively unpack it. Results suggest that long-term, habitual trauma suppression without reconciling trauma impact, was identified by veteran paramedics as a contributing factor to PTSD, depression, anxiety symptomologies and was a contributing factor to paramedic suicides. Unfortunately no known paramedic training programs educate and train paramedics about the importance of *EI*, the detrimental impact of permanent trauma suppression, and how to consciously, and proactively, address and reconcile the impact after the traumatic job has been completed.

These results suggest that the *stoic machoism* of *paramedic culture* is a contributing factor in a veteran paramedic's effective trauma management, especially after they overcome the myth that long-term trauma suppression is beneficial. Interestingly, these results suggest that the very training process and curriculum paramedic students undertake could be partly responsible for reinforcing the negative aspects of the *paramedic culture* of *stoic machoism*. Results of the current study found that all participants had been compelled to rebel against the negative aspects of the *stoic machoism paramedic culture*, in order to cope with the trauma impact, resulting in them finding their own effective trauma management outlets.

These outlets, and trauma management strategies, will be discussed in detail later in the Trauma theme section of this paper. Many participants reported a fear of losing their jobs, or being seen as unfit for work by their colleagues, or the management within the organisation, if they access counselling or psychological services. Participants expressed that many paramedics would rather work in a compromised condition, than take the potential risk of losing their jobs and be unable to provide for their family. As a result, participants suggested a paramedic culture of fear to openly seek out therapeutic support in case they may be perceived as emotionally weak or vulnerable by the organisation or management. Results suggest that this fear may have contributed to an ambivalent culture among paramedics toward seeking out psychological support services in times of need following trauma impact on the job. This will be discussed as a sub-element later in this

paper but the fear of losing their job was identified as one of the primary elements that caused paramedics to work in a compromised condition.

5.3 Working While Compromised

Working while compromised, was the second Work sub-theme and referred to the conscious emotional, psychological and physically vulnerable condition that paramedics continue to work in, as they provide medical treatment to patients. Results found that paramedics work in a compromised state, being affected in many different ways, such as; fatigue, personal life stress, and trauma impact. Being compromised by personal life stress and fatigue may apply to other professions as well, but making mistakes due to fatigue working as an accountant is not likely to put lives at risk, as it could for paramedics. Many studies highlight the risk to life due to workplace fatigue (Steege & Pinekenstein, 2016; Steege, Pinekenstein, Rainbow, Arsenault Knudsen, 2017).

A simple mistake resulting from fatigue as a medical worker could be the difference between life and death (Bournes & Flint, 2003). Fatigue can be the result of many factors, such as; emotional labour (Nyquist, Allen & Erks, 2018), trauma fatigue (Hannah & Woolgar, 2018), sleep disruption (Querstret & Cropley, 2012), compassion fatigue (Rohlf, 2018), stress fatigue (Grant, 2017), and fatigue among emergency medical workers (Patterson et al., 2018). Veteran paramedics confirmed many similarities with the above fatigue factors and acknowledged how this contributed to them working in compromised conditions. Whether working in a compromised state came from personal life stress, fatigue or trauma impact, paramedics suggested they were still expected to deliver the same standard of life saving treatment when arriving on the scene of a medical emergency. Participants in the current study expressed that the more compromised they were, and the longer they worked in a compromised condition, the greater the risk to a patient's life, and in some cases, their own or their crew partner's life. Results suggest that participants were very blase about working in their compromised conditions, which in turn suggested that they had generally accepted this as part of the job. Results suggest that *working while compromised* had become so normalised and accepted within the paramedic culture, that many participants were not even aware that their narrative described their compromised state. These results also suggest that paramedics work in compromised conditions because they accepted this as 'part of the job' and that they don't believe this can be changed.

The boundaries that veteran paramedics previously mentioned (stopping when participants felt compromised, etc.) were typically instigated when participants felt that a specific threshold of coping had been surpassed. Participants had learned to recognise the moment they felt compromised, were more prone to human error, and had become a risk to themselves, their colleagues, and patients. Participants also accepted this as part of the *paramedic culture* because it has become normalised and many veteran paramedics do not think it can be any different:

> *Participant 10: ...I didn't really have anyone around me, my strategy was very much, I just deal with it myself... (Line 40) ...well I knew the night after that bad job that I wouldn't sleep at all, and that I would have a couple nights of bad sleep, so I did call around to see a counsellor. I went to a friend's house and they said, "you look shattered" and I said, "yeah, I am, I did this particular job..." (Line 44) ...I do have a few nights where I don't sleep sometimes. Like the job when that guy who was in bits and pieces all over the road, I didn't go and have a barbeque straight away after that job... (Line 76) ...that's why I don't eat steak now. (Line 79)*

Participant 10 above expressed several times how their sleep was regularly affected and in some instances, they stated they didn't sleep at all some nights. At the end of Participant 10's quote, they express their conscious avoidance of going to BBQ's because they were aware of the likely emotional or psychological 'triggers' that this environment might create, which is another symptom of PTSD (DSM-IV-TR, 2000). The following quotes from Participant 3 provide another example:

> *Participant 3: If you're diagnosed with PTSD, or whatever, the organisation thinks it's an invisible little force that will pop out of nowhere, like having a seizure. They say, "we don't know if you're gonna be able to do the job anymore, you might end up rocking in the corner, so we are going to remove all liabilities... so thank you very much, we don't need you anymore" (Line 743)*

> *Participant 3: ...medics need to have the guts to stand up and say listen, I need time to process this, right now...Cause if the organisation keeps pushing trauma into me then it snowballs...it's like a little bush fire, if I don't sort it out now… then it is gonna rage and by the end of the day (Line 723) …at the end of a job organisations need to let medics have down time, whether it's a ten minute coffee break or half an hour. Sometimes a person just says that's it, I'm done for the day...then management asks, "why?" (Line 735)*

Results suggest that all veteran paramedics expressed various symptoms consistent with the diagnostic and statistical Manual for Mental Disorders (APA, 2000; DSM-IV-TR) for Post Traumatic Stress Disorder (PTSD). This does not suggest that participants were diagnosed as having PTSD, but does suggest that participants expressed trauma-related symptoms that fit many of the DSM diagnostic criteria for PTSD. For example, many participants had sleep disruptions, disturbing dreams following traumatic jobs they attended, experienced flashbacks and triggers that reminded them of traumatic events over long periods of time. Many veteran paramedics had learned which type of traumatic jobs, and their levels of intensity, which were likely to result in disrupted sleep in the coming days. Participant 3 demonstrates this sleep disturbance awareness in the following statement:

> *Participant 3: Jobs like babies dying in swimming pools… I don't get nightmares, but I do wake up… if my partner or one of the kids gets up at night to go to the bathroom and I hear running water, I'll wake up in a sweat. I won't cry, but I'll feel emotionally drained ...it takes me some time to settle back down after that but that's just the way it is. (Line 141)*

Participant 3 appears to be clearly aware that they continue to carry the trauma impact and are conscious of the associated sleep disturbances and may even identify the associated trigger (running water). Even though Participant 3 knows that they are still affected, they do not seem to think that this compromises their clinical ability to provide treatment to patients, or are not aware that their sleep disturbances can be resolved. Instead,

it appears that Participant 3 has reconciled the residual trauma impact by simply accepting the ongoing trauma symptoms and sleep disturbances by saying, "that's just the way it is." The following example helps illustrate how casual and accepting participants were about working while compromised:

> *Participant 6: Without question, the worst thing I had to deal with was being badly attacked by a patient... That was 10 years ago and I've got PTSD from that, I still have a hyper-startle response...still take medication...and was off work for some time after that. (Line 91)*

Like Participant 3, Participant 6 was also aware that they continued to carry the PTSD symptom of an exaggerated startle response following an attack from a patient, but continued to effectively work in this compromised condition. Again, this may not have any impact on their day to day ability to competently deliver clinical medical treatment to patients, but numerous similar events may have occurred throughout this veterans career which contributed to compounding trauma impact they are carrying:

> *Participant 4: …you WILL be affected by the work, there's nothing you can do, really, to stop being affected, it's how you manage your emotions that matters... There are definitely two types of ambulance officers, the first type is, "oh, look, there's a hole in his head, you can see right through it, come and see this." Then there's the other type who are like, "oh wow, let's cover that up with a blanket"... (Line 473)*

Participant 4 above suggests that veteran paramedics accept, as the paramedic culture dictates, that work-related trauma affects every paramedic and they all work compromised throughout their career. The compromised paramedic culture also accepts that long-term effects from trauma impact are a natural part of the job. *Working while compromised,* as part of the paramedic culture, is consistent with previous studies suggesting that PTSD symptomology is common among paramedics (Kucmin, Kucmin, Turska, Turski & Nogalski, 2018; Michael, Streb & Häller, 2016).

Veteran paramedics expressed that they do not currently feel sufficiently compromised that they are not able to cope on a daily basis, or that they feel emotionally overwhelmed from the past 15 or more years of working with trauma. Participants did express concerns however, about watching younger colleagues, especially juniors, continue to work whilst being emotionally and psychologically compromised. They believe that the younger medics are not emotionally or psychologically equipped to effectively manage the trauma impact to which they are being exposed. Many of the veteran paramedics also expressed how they used to feel more compromised than they do now, but have learned to effectively reconcile the trauma impact over the years through their growth as individuals. One possibility about why veteran paramedics can function so effectively, even while carrying residual trauma impact symptoms, may be due to the *PTG* they have experienced throughout their years of trauma management, but future research would need to explore this possibility. The veteran paramedics' effective reconciliation of trauma impact will be discussed more in the Trauma theme section in chapter 8.

5.4 Summary

In summary, the two Work themes of *stoic machoism* and *working while compromised* were identified as influential variables to veteran paramedics trauma management. While some aspects of *stoic machoism* were identified as beneficial, to help manage trauma impact during the traumatic event, it was also considered to be detrimental to paramedic well-being if the suppressed trauma impact was not later reconciled. The culture of *working while compromised* was also identified as an unhelpful way of thinking for many paramedics. Participants expressed the need to change paramedic thinking from acceptance of long-term effects of trauma impact, to a culture of intolerance for long-term trauma impact and passivity in reconciling trauma. Participants suggested that education and training about the advantages and disadvantages of *stoic machoism* and *working while compromised* is needed to help paramedics learn how to effectively manage these two Work sub-themes. The results from the Organisational theme will be reported next.

Chapter 6: Organisational Theme

6.1 Introduction

Results suggest that paramedic organisations influenced a paramedic's ability to manage work-related trauma. Participants identified how paramedic organisations can provide additional support to them in a way that will both foster improved trauma management and help increase the longevity of career as well as undermining variables in these areas. Results identified five Organisational variables that influenced veteran paramedics. Table 6.1 lists the Organisational sub-themes that participants most frequently made references to and were the most common across participants:

Table 6.1

Organisational Sub-Themes

Organisational Sub-Theme	No. of Participants
Management	12/12
Policies and Procedures	12/12
Registration and Governance	12/12
Support	12/12
Trust	12/12

Both positive and negative aspects of Organisational sub-themes in Table 6.1 will now be outlined in detail.

6.2 Management

The first sub-theme identified under the Organisational theme, which influenced trauma management for veteran paramedics, was *management* and the degree of support participants received within their respective organisations. The majority of participants expressed the negative influence that *management* had on their well-being and the perceived well-being of the paramedics in their organisation, especially from executive management. The following statements are comments that some participants made about an annual address delivered by a senior executive within one paramedic organisation on the induction day of new recruits:

Participant 5: At the beginning of induction school, they brought your whole family in... Management said, "if you're still in this job after seven years, you've got no ambition in life." Everyone just looked at each other in disbelief that he just said that. (Line 410) Management say they want you to debrief and take time to recover after difficult jobs but what they say and what they want you to do are two different things... (Line 107) Paramedics' needs have been clearly expressed but the management say, "nah." (Line 339)

Participant 9: …after some paramedic suicides, our organisation generated a whole report that skewed any kind of responsibility away from them, so that problems didn't appear to be their fault in any way... attitude changes need to take place at the upper management level if things are gonna get better for paramedics... (Line 519)

Participant 7: I know how many successful child resuscitations that I've done in my career and how successful child intubations are. I know about the importance of getting a golden standard airway. I've seen it, I've worked with it, I've got many, many years of personal experience to prove the success rate we've had, but here, they say, nah, there's no evidence to prove it." (Line 513) ...when we speak to management, they don't listen. We are supposedly an evidence based ambulance service, but I have no idea where they get their evidence from... (Line 512) …they were producing evidence that contradicted everything I was taught in paramedic school... (Line 513)

> *Participant 12: ...all the new recruits who are coming through the training programs now are being told by executive management that they only expect them to last five to seven years… I don't think it's right to tell them that. (Line 16)*

Other issues that participants raised regarding *management* were that executive *management* appear apathetic toward the provision of any kind of emotional and psychological support for the needs of the paramedics. Many participants expressed how the organisation appears to care more about making money than about the well-being of the patients they treat or the paramedics who work for them:

> *Participant 2: …for the organisation and upper management, it's more about the money than about the people. (Line 116)*

> *Participant 7: ...Our organisation practices, what I call, 'response time medicine'... Everything is about time. They don't practice 'patient outcomes' medicine here. Management is only worried about getting patients to the hospital to make money. They don't care about whether or not the patient walks out of the hospital alive or not, as long as you meet those times, that's all they care about... (Line 263)...it's all about making money and meeting response times. As long as you get there on time, it's all good, they don't care about what you do in the ambulance. It's a joke… (sarcastically) you could actually kill someone in the back of an ambulance and they won't care, just don't be two seconds late because then they will get upset with you. (Line 706)*

Results suggest that many participants experienced a sense of apathy from executive *management* regarding their overall well-being, and felt neglected by *management*, which undermined their trust in *management* to support them adequately. In many cases, participants felt both the organisation and *management* were deliberately working against them, as the following examples illustrate:

> *Participant 7: …being a paramedic here, our biggest stress is the people we work for, and it is a big stress, a* ***very*** *big stress, especially after leaving such a supportive organisation before coming here. If you've never worked for anyone else before, you don't know any different and might think it's normal here, but it's not. (Line 1066)*

> *Participant 12: …once upon a time, all us medics used to feel like a family, but now there's so many more people out there and it feels like management are purposefully trying to keep us apart and separate us, for whatever reason. You'll try to catch up with your colleagues, or eat lunch, and they say, "oh, you've got to clear and be ready for another job first"... (Line 137) ...you might be talking to your friends about jobs and managers are ringing you up saying, "you've been there for 10 minutes, why haven't you cleared for the next job yet?" They don't let you have any time to talk to friends and debrief, because they're chasing you, pushing you to get back out there on the road... (Line 144)*

The lack of support many participants experienced, from *management* within their organisation, was identified by veteran paramedics as a contributing factor to the difficulties that paramedics face. The irony of their situation was not lost on participants, who were being paid by their organisations to support and provide medical treatment to hundreds of thousands of people each year, but as employers, they did not seem to have the capacity, resources, or willingness, to provide sufficient support to a few hundred paramedic employees. These results suggest that participants believe that more effort could be made to provide the actual support required by paramedics, rather than the organisation's *management* deciding what that support for paramedics should be. Participants who have felt sufficiently supported by their organisation and/or *management*, whether currently or in the past, have identified high levels of organisational and managerial support, as contributing factors to their effective trauma management and the longevity of their career. Participant results identified *policies and procedures* as another organisational variable.

6.3 Policies and Procedures

The second sub-theme under the Organisational theme was *policies and procedures.* Participants reported that many of the *policies and procedures* within certain organisations were very difficult for veteran paramedics to reconcile in their minds, because many were in direct conflict with their values, ethics, morals and beliefs. As mentioned in previous chapters, the traditional values, ethics, morals and beliefs of paramedics, consistent with *persister* personality characteristics, might motivate them to save lives first, and worry about the consequences of policy and procedural breaches later. Participants expressed many *policy and procedure* limitations they felt were placed upon them that greatly influenced their effective trauma management. Many participants received very high standards of Advanced Life Support (ALS) training that they reported many of their locally trained colleagues had not received. For example, one participant reported that their organisation imposed a policy which would not allow paramedics to provide specific treatments, like decompression of pneumothorax.

A pneumothorax is defined as an acute progressive condition where air from the lungs leaks into the chest cavity and creates internal chest pressure that can collapse the lungs and cause respiratory arrest (Limmer et al., 2015). A pneumothorax often leads to cardiac failure if not quickly treated. To remedy a pneumothorax, a quick, simple procedure can be conducted to equalise the pressure in the chest cavity, often resulting in immediate life saving results. Participants suggested that not all paramedics are adequately trained to decompress a pneumothorax, so some organisations do not permit this procedure to be conducted at all, unless the patient has already gone into respiratory and cardiac arrest and has technically died. Participants continued to suggest that it is only under these circumstances, that a paramedic in their organisation is allowed to decompress the pneumothorax because the patient has already died and they can do no additional harm. This raised ethical concerns among some participants because many of them know how to perform this procedure, but are restricted by organisational policy.

> *Participant 7: Our organisation works according to the lowest common denominator and if they feel like the least skilled medic can't do the skill, they won't let anyone do it. So if a patient's dead, well, then they'll let you stick a needle in their chest, instead of improving the training to teach medics these competencies and be confident to know them. (Line 678)*

Participant 7 suggests that instead of the organisation providing the necessary training so that all paramedics are competent with pneumothorax decompression, restrictions were imposed upon all paramedics rather than training everyone up to know how to decompress a pneumothorax. Some participants expressed how restrictions, such as the above example, greatly contributed to unnecessary stress levels, especially if they believed that patients died because they were not allowed to perform these life saving procedures when they were competent to do so. For some participants, the conflict arises when organisational *policies and procedures* impose limitations or restrictions upon the paramedics, potentially risking patient lives. Participants identified a few examples of organisations limiting their paramedic ALS practices, such as using resuscitation drugs, decompressing a tension pneumothorax, or even intubating a child, because of local training limitations across the paramedic population or on the grounds of inconclusive empirical findings:

> *Participant 7: So, according to policy, we physically have to wait until someone goes into cardiac arrest before we can decompress a pneumothorax... (Line 666) …Things don't make sense here because our training programs and our training colleges aren't run by the right people… it's like asking a security guard to run a police training academy. (Line 674)*

> *Participant 8: If we go do a resuscitation and administer adrenaline to help the patient, we get in trouble from our organisation... or lose our jobs. We are also not allowed to intubate kids here. A medic who was trained in another country came here and intubated a 5 year old, which saved the child's life, but they almost got fired…you try to talk to the management about advanced life support techniques like that and it's foreign, they've got no idea what you're talking about. (Line 325)*

> *Participant 7: I work for a company whose policy is to just take everybody to hospital, cause they make money…but we've just flooded the hospital with people that don't need to be there. Then we get ramped for five hours... (Line 353) ...the local people here have been conned into thinking they are getting this wonderful ambulance service, but we are the cheapest to run. We are the cheapest, it only costs the local government here like $33 million a year to run us, where it's costing another state $333 million, and in this industry, you get what you pay for... (Line 394)*

Some participants reported that their organisations imposed policy and procedural restrictions because not all paramedics are trained in the same ALS techniques and thereby, must work according to the lowest common denominator of their trained paramedics. For many participants, the internal conflict arose when participants were forced to choose between saving a person's life and risk losing their jobs for breaching company policy, or comply with the *policies and procedures* of their organisation and risk a patient dying. While paramedics may not be faced with these types of choices on a regular basis, some participants experienced high levels of stress and worry when decisions like these presented themselves.

Participants reported the difficulties of being highly trained to deliver such life saving competencies, but being expected to helplessly watch patients die in order to adhere to organisational *policies and procedures*. These results suggest that organisational *policies and procedures* such as these, were influential factors in the trauma impact and effective

trauma management that veteran paramedics experienced. These results also suggest that organisational *policies and procedures* such as these, are a direct consequence of the past lack of registration and governance in paramedic training in some jurisdictions, which is the next Organisational sub-theme result to report.

6.4 Registration and Governance

The third sub-theme under the Organisational theme was *registration and governance,* which refers to the registration of qualified paramedics with a regulating and governing body which oversees, regulates, and governs the standards of paramedic training and practice. This is to ensure that specific paramedic competencies meet a consistent and minimum standard of practice and patient care within the paramedic industry. An example of a registered and governing body would be the current Australian Health Practitioner Regulation Agency (AHPRA, 2018), which oversees the national registration process and governs medical practitioners in Australia. From December 1, 2018, the Paramedicine Board of Australia (2018), under the support of AHPRA, was established for the first time and paramedic registration became a legal requirement, to meet the Board's registration standards of practice for paramedics in Australia. For participants, the lack of past paramedic *registration and governance* seems to have contributed to many direct, and indirect problems for many previous decades.

It is also relevant to the Organisational theme, because some organisations conduct their own paramedic training, which was not previously overseen, quality controlled, or registered as valid and reliable training, by any governing body. The lack of past paramedic *registration and governance* within some jurisdictions also means that the very definition of 'Paramedic' could vary significantly from one person to another and anyone could use the title of paramedic, regardless of their level of competency. As previously discussed, the term 'Paramedic' is typically reserved for ambulance personnel who have the highest level of training possible in the paramedic qualification hierarchy. Unfortunately the lack of *registration* also creates problems with the general public's perception about paramedic competencies, which may be incorrect, or misleading. Many participants expressed concern that the past lack of *registration and governance* of paramedic training greatly contributed to the significant variance in graduate competencies from one class to another, in addition to

differences in training curriculums across these classes. The following participant quotes help to illustrate these concerns:

> *Participant 2: The first thing that needs to happen is we need to have Australian registry. There's so many people with the title of paramedic who aren't actually paramedics. Our organisation provided training courses but they were all different… In a three day course, they learned how to cannulate, they learned physiology and anatomy. That's how long it takes, you can learn everything in three days... (sarcastically; Line 473)*

> *Participant 5: Training programs need to be consistent in what they teach… if some students come out one year and then they're taught by someone else another year, they all need to learn the same kind of things. The way that it is now, each year, is run by different people and there's SO much difference between what students are taught... (Line 268)*

> *Participant 4: ...organisations need to focus more on their human capital and less on making money… registration needs to come in, to make sure things are done right… (Line 1102)*

> *Participant 3: ...Paramedic course trainers need to be actual, proper, certified trainers who know what they're talking about, not just paramedics who need a break from being on the road. (Line 303)*

There are many issues surrounding the lack of a governing body. For decades there have been no requirements for organisations who privately train paramedics, to be held accountable for the quality of their training or for any substandard quality of care by their graduates. This also means that the community at large is misinformed about paramedic competencies and their standard of practice, and is deceived by paramedic organisations who promote themselves as being among the world‘s best. In fact, in some jurisdictions, veteran participants consider current training to be below the basic standard expected:

Participant 7: This ambulance service here are centuries behind everyone else in the world... (Line 561) ...the local people have been conned into thinking they are getting this wonderful ambulance service... (Line 674) ...I had been given the 'heads up' before I came about how backward they were here, but I couldn't have imagined how bad it actually was in my worst nightmare. (Line 796)

Participant 3: …our managers are predominantly just paramedics who've climbed the food chain, they're not managers, they're not trained to be managers, they're just people who have run up the ladder or have outlasted everybody else… They'll call us and say, "you've taken 25 minutes at the hospital and you're only allowed 20, what's your story?"... and it's repetitive… they do it from a distance and over petty stuff, and that's when we'll have a fight… (Line 347)

The comment by Participant 3 above is an example of the frustrations experienced by some participants that not only demonstrates the perceived lack of support from the organisation, but also the contribution the organisation makes to paramedic stress. Quotes such as these help illustrate how organisations undermine the trust their paramedics have in the competency of its management, but also the lack of support and understanding paramedics experience:

Participant 9: ...the organisation needs to be more people focused rather than functional and finance focused, like with response times... (Line 358) …there is a motto on ambulances that says, "for the service of humanity"... in the past ten years, that slogan has meant less and less to me. (Line 362)

Participant 1: ...the organisations do not have a very understanding face. They are pushing and pushing and making things more efficient and cutting down and it's causing problems… there's more harassment to get back out on the road. They're more concerned about response times than someone's health. The only training we get is on new, faster, invoicing processes... (Line 727) …the same effort isn't put into understanding and helping people… and that's not healthy. (Line 779)

Participant 3: Managers need to just be human, interact with your workforce like you want us to interact with our patients…Treat us as somebody who deals with a fair bit of stuff on a daily basis... (Line 355)

Participant 9: From my perspective, being inside the organisation, it's getting less and less about the humanity side and it's all about the speed of service… there's no personal element to it at all, it's all about the dollar… not about people... (Line 366) …It's not right, but what can you do when that's the attitude? (Line 426)

These results suggest that a multiplicity of issues influenced the lack of paramedic *registration and governance*. The organisational sub-themes of *management*, *policies and procedures*, and *registration and governance*, were all influential factors which contributed to the support, or lack of support, that veteran paramedics felt they received from the organisation they worked for. It has been very unfortunate that no paramedic regulating body has monitored and regulated the delivery of local paramedic services prior to 2018. Participants suggested that this lack of *registration* and governance has compromised the quality, trustworthiness and dependability of paramedic training, the treatment and quality of care that patients receive. Without this type of governance in place organisations are not held accountable for the quality of emergency services they provide to the general public and how paramedics are treated by the organisation.

6.5 Support

The fourth sub-theme under the Organisational theme was *support*. Results identified numerous ways of desired support, or types of support they have experienced throughout their paramedic careers. The sub-theme of *support* was defined by participants as the emotional, psychological or physical engagement by colleagues, management or other employees from their organisation, which contributed to veteran paramedics effective management of work-related trauma. Both positive and negative participant references were provided. The large majority of references made by participants was about the lack of support that they experienced from their organisation. There were four elements identified by participants in relation to *support;* 1) *on the road support*, 2) *lack of support*, 3) *job management and allocation,* and 4) *sense of community*.

6.5.1 On the road support.

Results suggest that *on the road support* was one of the most recognised and valued forms of support identified by participants. *On the road support* was described by participants as the emotional, psychological, and physical presence of support staff from their organisation, outside of their shift partner, who were out on the road with them in various capacities. In the large majority of instances, these individuals were chaplains who worked, or volunteered, for their respective organisations. Participants expressed profound respect, appreciation, gratitude for their Chaplain and the support provided:

> *Participant 11: …we used to have a wonderful chaplain... and he had his ear to the ground. If you did something like go to the hospital on a priority one, he'd be there… He would just know where you were and it could be 3am or 3pm, he was there. (Line 362)*

> *Participant 5: Having a good Chaplain is really important, having someone that's not management, engaged with the medics, and is everywhere, all the time... Ours was great, you go to the hospital and he's there, you come back from a bad job and he's there. (Line 308)*

> *Participant 11: ...the fire department chaplain shows up with a coffee machine in the back of his van and he makes coffee and he listens to us as well as the fire fighters. We don't have our chaplain in our organisation anymore and he's left a huge gap of support we don't get anymore... (Line 364) I'm not a religious person, but someone who listens on the job and you know you can trust him is a huge positive influence…We've got two new chaplains (in our organisation) and I've never seen either of them on the road... (Line 370) ...So many of the paramedics don't even know what the new chaplains look like. (Line 414)*

Many participants felt like anyone who was genuinely interested in providing support to them should prove their intentions by being out on the road at any hour that was needed, just as paramedics were:

> *Participant 7: I was talking to a support worker from our organisation and I told them that if you want people to trust you, you need to get off your butt and drive around in your car at 2 o'clock in the morning, on a Saturday and Friday, in the pouring rain. I said, then paramedics will start to trust you because they will begin to build up respect for you. They will see that you're genuine about what you're trying to do. Whereas if you do the 9am-5pm office thing, you'll be seen as an office worker and no one will trust you... (Line 1382)*

> *Participant 5: We've got a chaplain but no-one ever sees them... The organisation has other support people who might ring you, or might text you, and you think, "Who are you?" You just think, "I don't even know you, I'm not going to talk to you,"…then if you do by chance talk to them, the next thing you know, everybody knows what you said because it's all passed on to management and then you're professionally penalised for talking and that lack of confidentiality spreads quick. (Line 323)*

> *Participant 7: ...our organisation has an environment of mistrust, so they're going to have to work really hard at regaining people's trust because medics don't want to talk to them... (Line 1398) I won't talk to our support department people if they call me... I've got missed calls from them, I don't answer my phone when they call me because I don't trust them. I go to my psychologist, they sort me out, they sort out everything that needs to be sorted out... the Chaplaincy service we had back home was phenomenal, they're 24 hours a day. (Line 1403)*

Results suggest that participants experienced the most support from organisations, and trusted them the most, when the support staff were on the road with them and readily available when needed. These results suggest that *on the road support* was identified by participants as a contributing factor to veteran paramedics' ability to manage work-related trauma. Unfortunately, the large majority of participants expressed that they have very little, if any, *on the road support* from their organisations. Not only was *on the road support* lacking for many participants, but the large number of participants expressed an overall *lack of support* from their organisations.

6.5.2 Lack of support.

Many participants expressed how supported they have felt by organisations they have worked for in the past and fondly reminisced about how much easier it was to manage stress and trauma from work. These participants associated their past positive experiences of good organisational support with their past job satisfaction. Unfortunately, results regarding support from current organisations suggest that many participants experienced very little support. The *lack of support* that participants identified came in many different forms, but the most prominent forms were; impersonal and insincere attempts of support by support staff, coercion support attempts, passive support, conflict with the organisation, inept organisation support, and management dictating terms of support.

The examples provided below help illustrate how participants experienced a *lack of support* from organisations. Some organisational support was established, and in some cases, imposed upon paramedics, with very little consultation with them or consideration for their needs. In many instances, participants reported that organisations, and their respective managements, were provided with information about the support that paramedics required, but this information was seen by participants as disregarded or ignored:

> *Participant 5: ...we tell our managers what we want and ask them to speak with upper management and they say, "no, we're not going to speak to upper management." (Line 536)*

> *Participant 7: I was chatting with someone the other day about all the assaults going on because I got assaulted again, two weeks ago... (Line 461) …I asked management, "have you noticed there's an increase in assaults?" They said, "yes." I said, "have you noticed there is an increase in violence that is being projected at us?" And they said, "yes." I said, "really?" I asked them, "why haven't you told us? Send out a newsletter or something to let us know, it's* ***us*** *that it's happening to." The organisation knows what's going on but won't admit there's a problem because then they have to deal with it. (Line 465)*

In other situations, the type of organisational support provided is imposed upon some paramedics and they are told what they need and how they need it. Participants reported that often the support department contacts them asking for sensitive information, when no rapport or relationship of trust had been established first. Participants reported their discomfort with disclosing private and sensitive information which contributed to feelings of emotional and psychological vulnerability to total strangers, regardless of whether or not they worked in their organisation's support department. The following example helps illustrate the lack of support that participants reported, in various forms, even with a whole support department is in place:

> *Participant 10: ...now someone rings me on the phone and calls me by name but I don't know who they are. They introduce themselves and tell me, "it's just come through that you've done this difficult job"... and I'm thinking, that was seven days ago! ...which job was that again? (Line 455) ...those support people need to be out there on the road making personal relationships with us, front and centre all the time so you know each other...Not just this little 'good will' phone call once every three months. Every six months you might see someone from the support department...and you think ah, ok, whatever (Line 459).*

As the above quotes demonstrate, participants reported not feeling supported unless the organisation's support personnel are engaged with them on a personal level and take the time to get to know them. Participants also lacked confidence in the life experience and competencies of the support personnel, as described in the following participant quotes:

> *Participant 10: …another problem for me is the age of the support workers… they need someone more mature... I would guess the majority of them are around 27 to 33... I can't relate to them and don't know them, so there's no point meeting with them and trying to talk... (Line 501) You've got to develop rapport…a relationship of trust first... (Line 503) …I'm not going to tell someone that I don't know how I'm doing, over the phone…especially when there's no rapport and they're too young for me to talk to anyway. (Line 519)*

> *Participant 6: The support system that we have now is, I'm looking for a polite word, useless… we call our support department, 'wealth and hell-being...' (laughing; Line 217) ...they're spending lots of money but don't respond to our needs…management has told them **not** to be proactive in supporting us, **not** to come ask us if we're ok, but to wait for us to approach them, that's crap and totally defies description. (Line 221)*

Participant 9: I've had several conversations with our support people but I don't get personal with them because I don't trust them. They say, "Oh, we can talk about things." I just think, "I can't talk to you, because you have no idea what you're doing!" (Line 283) ...as a group, they're horrible support and the people who oversee them are horrible support too. (Line 287) ...I get that they're young… that you have to live life to have life experience, but don't tell me about what I should do about my difficult life experiences when you haven't had any yet... (Line 309)

Participant 7: Their first line of contact with support staff is woeful. I've phoned them a couple of times and the person says, "oh, how can I help you?" I said, "well I don't know," and she said, "oh," and there was silence. I thought to myself, "you're supposed to be helping me to stop from killing myself and that's the best you've got? Is that it?" Eventually after a long silence, she said, "would you like me to get someone to phone you?" If they don't know what to do, say so, and get someone who does. (Line 786)

These examples show how participants felt about the *lack of support* they experienced and how this contributes to the difficulties of managing trauma, because participants did not feel that their organisation could be utilised as a support network or *support* resource when they needed them to be there. These results suggest that participants experienced very little support from their organisations and felt the negative effects from the lack of organisational support. Another *support* element is *job management* and *allocation*.

6.5.3 Job management and allocation.

Results found that *job management* and the *allocation* of jobs was identified as a contributing factor to effective trauma management. This support variable is similar to the *trauma impact* elements of frequency, intensity and duration because the way emergency jobs are managed and allocated influences the frequency, intensity and duration of a

paramedics exposure to trauma. Participants explained that each job allocated to a paramedic crew is categorised as a priority 1 (urgent), 2 (moderately urgent), or 3 (non-urgent). This is relevant to a paramedic's effective management of work-related trauma because how and when jobs are allocated during their work shift influences the extent of emotional, psychological, and physical labour that they will expend.

Participants explained that when emergency calls are made, they are allocated to an ambulance crew. Many participants found greater difficulty in managing oscillating trauma intensity, going from a priority one call to a priority three call. This was difficult for participants because the adrenaline released in their body, when responding to a priority one call, created a high emotional, psychological, and physical response. Being allocated a slow, priority three job, right after a priority one job, can result in a form of 'adrenaline crash,' where the body comes down from the rush of adrenaline and is more emotionally, psychologically and physically fatigued than normal (Wilson, 2014). When this process occurs with high frequency, especially multiple times in a day, it can result in adrenal fatigue. Adrenal fatigue is defined as the fatigue that occurs after the body releases adrenaline into the bloodstream, during high stress situations (Wilson, 2014). The high frequency, intensity, and duration of trauma exposure for paramedics could be a contributing factor to them feeling in a "low mood" following a high trauma situation, as Participant 6 illustrates below:

> *Participant 6: ...if you're immediately thrust onto the next job, and if the next job is a very low priority job, then you've gone from high excitement and physiological and psychological demand to a real downer, and that causes so many problems when you get a high priority job and you come straight down to a low one... (Line 1018) Everybody gets so angry and asks, "why did I get a three straight after that?" It's such a downer... they finish the priority one and then get sent off to take Mrs. 'Smith' to a podiatry appointment, and you just think, "ahh (sighing angrily), really?" (Line 1036)*

As the above example illustrates, the poor *job management* of *job allocation* not only affected Participant 6 physically, but they also responded emotionally with anger. In some cases, participants expressed how the timing of jobs allocations does not appear to be managed very well by the organisation, as shown in the following examples:

> *Participant 6: Then we're assigned to jobs way out of our working area, and it's nearly the end of our shift... I'm tired and grumpy and then we're assigned to a priority one that is likely to take a long time... and you think, oh, please give me strength... (Line 1140)*

> *Participant 7: Recently, an ambulance was called to drive 60 kilometres on a priority one job… There isn't going to be a pulse by the time you get there, it's ludicrous! (Line 656)*

Results suggest that how paramedic jobs are managed and allocated influences the down time needed between jobs to emotionally, psychologically, and physically recover from trauma. As previously mentioned, veterans found down time between jobs to be an important contributing factor to career longevity and effective trauma management. The majority of participants expressed the need for more effective and strategic *management and allocation of jobs* for ambulance crews, so that strategic down time could be allocated. In addition, participants suggested that the monitoring of job priorities would help reduce the risk of adrenal fatigue and improve the overall well-being of paramedics. The following example of poor *job management and allocation* is illustrated by an ambulance crew that was assigned a fatality job, involving a member of their own family, a situation which should never occur:

> *Participant 2: I went to a job once, the worst job I've ever been to. We were called to a job, and after hearing the address, I looked across at the driver and he just took off like a madman, it was his home. I said to dispatch, "please check the occupants of the vehicle"…I told my partner, "slow down, pull over, I need you to pull over." (Line 1299)*

In the above example, the dispatchers who allocated the job were unaware that the address of the emergency call was the home residence of a responding paramedic. This oversight led to more severe trauma impact than was necessary, for both paramedics attending this job. This unnecessary additional trauma for the paramedics could have been averted with more thorough job management and allocation. The support that the paramedic demonstrated to help protect his compromised colleague was an example of comradery, and a *sense of community* among colleagues.

6.5.4 Sense of community.

Sense of community was previously discussed in the *paramedic culture* section of this dissertation, but the results suggest that paramedic organisations also had a unique sense of community among its paramedics. Participant results suggest that organisations can greatly contribute to, or undermine, the paramedic *sense of community*. Participants recounted the importance of feeling a *sense of community* with colleagues within their organisation. Participants who experienced a strong organisational *sense of community* with past employers, expressed how powerful a support it was for them. Results suggest that veteran paramedics identified this variable as the most influential factor of support in their career. Unfortunately, many participants in the current study reported a poor sense of community within their current organisation and emphasised how difficult it was to be motivated to go to work each day, especially when they had come from an organisation with a strong sense of community. *Sense of community* results were very similar to other Organisational *support* results, in that both were incredibly supportive when they were helpful, but both contributed to the stress that paramedics experienced when support was absent or unhelpful. Results suggest that small groups of colleague support existed within organisations, but these were established by individuals, not fostered or encouraged by the organisation. The following participant examples help to illustrate participants' *sense of community* within organisations:

Participant 10: ...my best support network are the small group of us who went through training together and are still in the job… when I went through the system, we were taught by the old school people… We had a really good comradery… people were really close and talked about jobs a lot. Students now are a lot younger now and I certainly don't see that kind of comradery in them... (Line 272) The organisation and managers are not supportive at all, they're just ticking a box and reacting to problems... (Line 432) ...they're not even there supporting us clinically, let alone emotionally... (Line 468) ...we haven't got any emotional support, zero, yeah, none at all... (Line 480)

Participant 12: …we were a small class who all bonded. Everyone got along and we were all close, so when we all went out on the road, you knew that there were people out there that you knew really well from that time learning together in the classroom... (Line 330) ...it really helps if you can get a support network together, even just one or two people, colleagues that you can trust and talk to... (Line 334)

The absence of an organisational *sense of community* was reported by participants as contributing to a lack of job satisfaction and in increased difficulty going to work on a daily basis. Participants who worked in an environment with a low *sense of community* suggested that trauma work had more of an impact and was more difficult to manage. When it came to paramedics talking or debriefing about the trauma impact they were experiencing, results suggest that the majority of paramedics were willing to speak with colleagues they work with. These results suggest that when the *sense of community* is high within an organisation, paramedics may be more effective in managing work-related trauma. For organisations to facilitate a helpful *sense of community,* results suggest that trust must also be high.

6.6 Trust

Trust was a dominant issue for participants and the fifth and final Organisational sub-theme to report and discuss. Participants identified three elements of trust associated with organisations. First, was the Organisational *culture of mistrust* that participants expressed within their organisations. Second, was the paramedics' *trust in the organisation* and third was the *trust between paramedics*. *Trust* between paramedics and the organisations they worked for, was a major contributing factor that not only influenced their ability to effectively manage work-related trauma, but it also greatly undermined their job satisfaction because participants did not feel that they were able to trust their organisations for support. A *culture of mistrust* within organisations is the first *trust* element that will be discussed.

6.6.1 Culture of mistrust.

Participants expressed a *culture of mistrust* toward *management* within their organisation and a general *lack of trust* between each other. The *culture of mistrust* between the organisation and paramedics was reported by participants as being a betrayal of trust through the breach of confidentiality, and disclosing sensitive personal information about paramedics to others within the organisation, without any form of consent. The large majority of *trust* issues participants reported were between the paramedics and the organisation that they worked for:

> *Participant 12: There's been big trust issues with our organisation because medics have gone and told them private information in confidence, and it got back out onto the road to everybody else, so people learned not to talk to the organisation about anything. (Line 163) …it's a shame, it shouldn't be that way but that's the way it is a lot of the time. You've gotta look out for yourself and look out for your colleagues. It feels like the organisation is trying to keep us apart so we don't know what everyone else is doing, that means we don't get as much support from each other anymore… (Line 338)*

Participant 7: I've got to give the organisation a 10 out of 10 for how they've reacted to all the medic suicides cause they've got a lot of people on board to help now… they provide free counselling and psychologists…unfortunately, they've only just now done it, and the culture of mistrust is already set... (Line 737) Our organisation has an environment of mistrust, so they're going to have to work very, really hard at regaining medics trust, because no medics wants to use the organisations support people… (Line 739)

Participant 9: I just want to say this… We need a cultural change within our service… there needs to be a really huge cultural shift. (Line 264)

Participant 11: …there's a lot of mistrust in the organisation, I know they've offered to pay for medics to see psychologists but a lot of people are afraid to go to them because the organisation will know all about it. (Line 302)

Participants suggested that paramedics are not trusted by the organisation to manage their own time effectively or productively so between jobs without taking advantage of the organisation's time. The following quotes show that participants did not feel supported by their organisations and some implied that some organisations didn't want paramedics supporting each other:

Participant 9: I remember one medic who tried to support a struggling medic in a remote area and was told by a manager, "It's not your business." Not long after that, the struggling medic had a breakdown…was later hospitalised… was still struggling, and went right back out on the job soon after. (Line 405)

Participant 3: Organisations need to be able to let medics decide for themselves if they feel compromised after a difficult job… that we can take a ten minute break to have a coffee until we feel like we're good to go on to the next job. Whether that takes half an hour, or if the person just says that's it, I'm done for the day. The organisation shouldn't ring people up and say, "well you haven't given us a signed statutory declaration about why you took some time off after that job (joking)." We shouldn't have to justify it to them. (Line 731)

Participant 7: My organisation doesn't even allow us to have that playful banter any more, and if you don't have that playful banter, well you don't have that stress release. I was chatting to a friend of mine the other day about all the suicides here, because there have been a lot...there have been six or seven suicides in the past 15 months and then other things going on that the organisation kept quiet... (Line 155) We have so many restrictions and rules enforced by the organisation that limit the medical care we can provide to patients. For example, we physically have to wait until someone goes into cardiac arrest before we can decompress someone's chest because the organisation doesn't trust us. (Line 666)

6.6.2 Paramedic trust in organisations.

The level of *paramedic trust in organisations* was reported to be very low when it came to providing the necessary support for paramedics who were impacted by work-related trauma. Participants experienced a lack of trust in their organisation due to; betrayals of trust, breaches of confidentiality, poor provision of pastoral care, lack of validation toward paramedic concerns, poor management of sensitive information and situations, and lack of confidence in management competency. Not only was the lack of trust and *lack of support* detrimental to participants, it was reported to exacerbate the negative impact that work-related trauma had on them. The overall experience that participants reported was that they felt their organisation abandoned them to manage work-related trauma impact alone.

This lack of trust and perceived abandonment was reported as creating a division between the organisation and paramedics and also between paramedics themselves:

> *Participant 12: The organisation isn't going to change, they'll just go around and around. I've been here long enough to see that they're just gonna keep changing people's names in the same roles, but nothing actually changes, so it's really a waste of time to talk to them. (Line 156) Support is only gonna happen from colleagues supporting each other because the organisation's not going to support us. If something goes wrong, you'll be out of a job, they're not going to back you up. (Line 160)*

> *Participant 11: I know that a lot of medics don't trust our organisation... there's definitely a lot of fear from medics that they might lose their job if they seek help. (Line 307)*

> *Participant 7: We're getting support now, but unfortunately our colleagues had to lose their lives for paramedics to get what was needed. So I'm extremely grateful for that, I'm not grateful that they lost their lives... (Line 493) …I never heard of one suicide where I was from... here, when you speak to the organisation, they don't listen. (Line 504)*

Many participants expressed such a lack of confidence and *trust in their organisation*, that they refrained from seeking any kind of help if they were affected by a traumatic job. One participant even stated that they would rather die than willingly seek support from their organisation. Another aspect of mistrust between organisations and paramedics was the lack of trust in the organisation's duty of care for its paramedics:

> *Participant 12: …all of the medics that I saw go to the organisation for help, just hit a brick wall and they came back and said, "they're not changing..." (Line 146)*

The above quote by participant 12 suggests that their organisation isn't going to change in their lack of support for its paramedics. Participant 7 below suggests that the apparent apathy that they feel from the organisation undermines the *trust* they have in them to care for paramedics and provide necessary support:

> *Participant 7: …it's so sad that some of my colleagues, and one or two of my close friends, had to kill themselves for us to be able to get the support we now have… It should have been given to us before medics started dying, and the fact that they won't acknowledge it, is a culture of bullying and harassment inside our organisation... (Line 747)*

> *Participant 3: …why do we keep having training on invoicing? So we can generate the bills faster… I'm a paramedic, not an accountant. I said, "questions about invoicing are the last things I ask, not the first" and they said, "Oh no, it should be one of the first..." (Line 369) …I'm not going to make saving peoples' lives about money, and that's why we don't trust them. (Line 373)*

Participants suggested that the lack of organisational *support*, through the violation of *trust*, makes organisations partially responsible for the impact that work-related trauma has on the paramedic population. The following quote by Participant 7 insinuates that the lack of support from their organisation may have contributed to suicides among colleagues.

> *Participant 7: ...we had been asking our organisation for help for years but as soon as the suicides hit the newspaper and all of a sudden people started looking at our organisation, they sprung into gear…(Line 493) ...they got all these psychologist on board and they started offering free counselling for staff members, for the spouses of staff members, for the kids of staff members... unfortunately my colleagues had to lose their lives for us to finally get the support that we needed. (Line 496)*

6.6.3 Trust among paramedics.

A lack of *trust among paramedics* was also an issue identified by participants as an undermining factor to trauma management and career longevity. As previously mentioned, the support networks and trauma management outlets that participants developed throughout their career were very important. Mistrust between paramedics was found to undermine their willingness to seek support from colleagues when affected by trauma. Unfortunately, many of the trust issues between paramedics were facilitated by a betrayal of trust amongst colleagues, directly and indirectly. Examples of trust betrayal between colleagues was expressed as the disclosure of confidential personal information to an individual, which was then passed on to others, eventually becoming common knowledge among paramedics and management throughout the organisation:

> *Participant 10: ...the younger medics are on social media all the time, posting things... they take photographs while working and put it on social media and I don't want it on there. The organisation is against it but it still happens...You're not going to trust those people are you? (Line 83)*

> *Participant 11: ...there were certain colleagues, there's no way you're going to share anything with, because they are a 'blabbermouth,' or they'll interrupt... I confided in someone and asked them to please not tell anyone and before the end of the day, everybody knew. (Line 67)*

An example of indirect trust betrayal would be the sharing of confidential information, spread by third parties, violating trust among colleagues. The following participant quote provides an example of the lack of *trust among paramedics*:

> *Participant 12: Even when we had peer support groups, trust was not there anymore... It would have worked great if confidentiality would have been maintained... (Line 377) ...You would say, "please don't tell anyone," but it would keep going further and within two hours everybody in the organisation knew... (Line 389)*

Results suggest that the trust issues between paramedics undermined the support they could provide to each other as well as the overall support available to them. Participant 7 below experienced a loss of trust in colleagues they once trusted and called their friends:

> *Participant 7: That person who you thought was your friend was not actually your friend, he just happens to be in the same uniform and in the same building as you, but that person's not your friend, so you learn that the hard way. (Line 271)*

The above examples demonstrate the lack of trust experienced by numerous participants, but the irony of this is that many of them emphasised the need to talk to someone or suffer the consequences of trauma impact:

> *Participant 11: ...sometimes it's hard to talk and find a person you can talk to but I would say, get it out and talk to someone you trust. (Line 266)*

This paradox leaves paramedics in a predicament because they are encouraged to talk and debrief as an outlet when traumatised but they often express ambivalence about doing so because they do not trust their colleagues, or the organisation, to keep the shared information confidential. This lack of trust appeared to be a general consensus among the majority of participants with a few exceptions of long standing, tight knit, colleague relationships that were forged during training. These early established networks support the previously discussed notion that establishing support early was identified as a contributing factor to effective trauma management and career longevity for some veteran paramedics in the current study. Veteran paramedics were very forthcoming about how organisations could make changes to improve support, as the following participants outline:

> *Participant 10: ...organisations need to have their (support) people out there, front and centre all the time. Not just this little 'good will' gesture every three or six months.....Maybe every six months you **might** see someone from the support department but you write them off and think ah, ok, whatever... (Line 460)*

> *Participant 10: They need to make the relationship more personal… a lot of them are younger people in the job who haven't got much life experience. They might have been in the job between five and ten years and I really think, really? What kind of emotional and personal support could you give me? (Line 472)*

6.7 Summary

In summary, certain organisational factors either contributed to or undermined effective trauma management and career longevity for veteran paramedics. For participants, work-related trauma appeared to be more manageable when organisations and *management* were supportive, *policies and procedures* helped empower paramedics, paramedic *registration and governance* was in place, and strong bonds of *trust* existed within an organisation. The absence of these organisational factors were found to contribute to increased stress for paramedics and undermined the effective management of work-related trauma and career longevity.

Chapter 7: Training Theme

7.1 Introduction

Training was the fourth theme identified by participants which contributed to career longevity and their ability to manage work-related trauma. Two Training sub-themes were identified across all participants. Each respective sub-themes will be outlined in detail. Table 7.1 below outlines the Training sub-themes reported by participants. Training refers to the influence that participants' own paramedic training had on their ability to manage trauma and how much it contributed to the longevity of their careers.

Table 7.1

Training Sub-Themes

Training Sub-Theme	No. of Participants
Early learning trauma management	12/12
Training type	12/12

The Training theme will also include recommendations which were suggested by participants could potentially contribute to effective trauma management in the future for both paramedics in the field, and students in the training process. Results found the Training sub-themes of *early learning trauma management*, and *training type* contributed the most to veteran paramedics' sense of trauma management efficacy. *Learning trauma management early* will be the first Training sub-theme discussed.

7.2 Learning Trauma Management Early

Studies suggest that learning coping strategies for stress in emergency situations may help reduce long term trauma impact (Price, Kearns, Houry & Rothbaum, 2014), which supports the findings of the current study. Many participants in the current study reported that they learned some form of trauma management strategy early in their career. Many veteran paramedics attributed the learning of trauma management strategies to the practical-based training that they received when they were students. The large majority of

participants stated that they were trained under a practical-based program, which involved some variation of a six to ten week theory learning in the classroom, and a year of practical 'on the road' training by veteran paramedics, who had been trained in the same way. The following participant quotes help to illustrate this point:

> *Participant 4: …when I went through paramedic school, it was a graduated course. A four to six week residential course... the people you worked with taught you... (Line 581)*

> *Participant 3: 2001 was my first day of induction, so I"ve been on the road since ten weeks after that. (Line 3)*

> *Participant 2: When I joined the ambulance service it was about six weeks in class, and 12 months on the road, learning as you go. There were still training modules, projects to hand in and clinical rides with supervisors. (Line 301)*

The large proportion of participants in the current study stated that their main source of learning how to effectively manage work-related trauma was taught to them by their mentors, while being trained 'on the road' as a student. The large majority of participants reported that their practical 'on the road' training was where they really began to learn how to effectively manage work-related trauma:

> *Participant 2: When I was a student, a clinical supervisor would come and take you for a ride around and talk to you about the different jobs you attended, how they affected you and how to cope. (Line 303)*

Many participants also expressed how they learned some degree of stress coping strategies much earlier in their life, which formed the foundation of their trauma management as paramedics. The subsequent paramedic practical training 'on the road' that they received from mentors and supervisors, built upon their existing foundation of trauma management:

> *Participant 2: As a 15 year old… a mentor explained to me that the patient injuries from an accident were irretrievable and the patient died...he said, "we can't save everyone." My mentor was quite amazing, he told the lad and gentleman who had died, "I'm just going to put a blanket over you now," and just tucked them in... (Line 57) ...Very respectful... he said to me, and I'll never ever forget it, "That's somebody's mother, that's somebody's grandmother, it's somebody's sister, it's their daughter… it could be a member of your family," and I've never ever forgotten it and I've always treated deceased patients like I would my own family. (Line 61)*

Participant 2 recalled how a mentor taught them by example, at 15 years old, two important principles that they have continued to carry with them. First, to accept that not everyone can be saved, and second, the importance of being respectful toward people who have died. Remembering these two principles helped them learn to accept death and dying as a part of the job, as a part of life and consider the prospect that not everyone can be saved. Another participant started as a volunteer with an ambulance service at the age of 16 and was exposed to trauma management strategies quite early in their life:

> *Participant 8: We were 16 year old when we joined as volunteers… I went in there pretty naive, thinking I'm not going to be affected by everything. I'm just going to help people… that thinking went south pretty quickly. (Line 50) ...a lot of robberies and murders... it was trauma central, dealing with that wasn't so great in the beginning... (Line 79)*

> *Participant 8: I got to a point where I needed to find a system that helped me… put things together... (Line 83) ...If we can talk about all the small things, the little things that bug you, it will be so much easier when the big jobs hit you. (Line 163)*

> *Participant 9: ...as a cadet at the age of about 10, I started doing basic first aid… then when I got off my p-plates, I went straight out into the ambulance service and out on the road... (Line 11) ...I did my first resuscitation at 15 (years old), it was a friend ...who got hit by a car and I did CPR on him but it didn't work. I was sent to a counsellor and I think that held me in good stead for many years because I learned really good coping mechanisms... (Line 70)*

Results suggest that the earlier veterans were exposed to trauma and were taught, or mentored, how to effectively reconcile the impact, the more capable they were to effectively manage subsequent work-related trauma. Many participants suggested that having well practised trauma management strategies in place before being exposed to work-related trauma, would help future students:

> *Researcher: So what recommendations would you suggest that could help students manage the trauma that they will be exposed to, going into their career?*
>
> *Participant 9: I think going into it with your outlets already in place, your stress outlets in place. To know that if something goes wrong, you know what to do... (Line 461)*

The above participant quote demonstrates that veteran paramedics relied on existing trauma management strategies they had learned early in their career, or early in their life, suggesting that this provided some degree of emotional and psychological preparation for the future trauma they would experience. These findings suggest that training paramedic students with effective, in-depth strategies, early in their career, could potentially contribute to more effective trauma management. More paramedic research would be needed to help explore this theory, but the potential implications of standardised training curriculums, that provide in depth and effective trauma management strategies, could help address some of the difficulties that paramedics face. Another factor identified by participants to influence early trauma management training was the type of training that they received as students.

7.3 Training Type

Training type was identified by participants as another influential trauma management variable. *Training type* referred to the difference between practical-based training and theory-based training. Practical-based training was referred to as the training environment predominantly conducted as a 'hands on,' or 'learn as you go' training program conducted "on the road." The original training programs identified by participants were predominantly practical-based training programs delivered by hospitals or organisations, not through universities. Participants suggested that over the past few decades, more and more practical-based paramedic training programs have changed to university-based training programs. Compared to when they were students, participants suggested that many of the current university training programs allocate a larger proportion of time to studying theory, with less training time being spent on the road. . As identified by the quotes below, participants regularly commented on this, suggesting that the type of training students receive greatly influences their future ability to cope with working with patient trauma:

> *Participant 2: I think the 'old school' training was a lot better. The system of learning now, four-years of university, must be absolutely, intense as... (Line 303) ...Staying in the industry is all about the type of training you received. Training now has too much information, I think the scope of a paramedic role has gotten absolutely ridiculous. (Line 1415)*

> *Participant 12: I was trained in the hospital training program… so we didn't go through university. I loved that sort of training where you get some knowledge and then go out on the road with a qualified paramedic, who teaches you the skills… and you apply what you learn... (Line 266)*

7.3.1 Practical-based vs. theory-based training.

Results suggested that participants identified *practical-based training* as a very important aspect of training. In many cases participants who received *practical-based training* spent a total of six to ten weeks in the classroom, much of which was learning clinical skills, such as first aid and Cardiopulmonary Resuscitation (CPR), followed by a

minimum of one year learning the practical components of what they learned in class, on the road. All veteran paramedics in the current study stated that the training programs they went through were more *practical-based training* programs, than *theory- based training* programs. This is important to note because the majority of participants attributed a large portion of their effective trauma management to strategies they learned during the *practical-based training* they received as students. These results do not suggest that university-based training programs do not contribute to trauma management but they do suggests that participants believe the practical-based programs helped them manage trauma better than what they believe the current training programs do for new graduates:

> *Participant 11: …when we first came out on the road we had a mentor... I was a mentor for juniors coming through and part of that mentoring process was to finish the job and then say to the student, Ok, is there anything that we could have done differently? So maybe it's just ingrained into my psyche' now that I do that myself after each job... (Line 264)*

Participant 11 recalls how they were taught as a student, and the job review training they received, which they later passed on to the students that they mentored. Participant 10 recalls a similar experience but goes into more depth regarding the emotional impact:

> *Participant 10: ...we used to review our job scenarios and how we felt when I was in training... I reviewed with my students the same way because that is how I was taught to review…that has all formed part of my coping with these big jobs and thinking about it...you have to be able to do that, you have to. (Line 368)*

> *Participant 2: ...good trauma management comes from good partners, who also had old school experience and training. (Line 400)*

> *Participant 10: Maybe the students aren't being taught this, they seem to have a wall up… to not let their emotions come up… I have my emotional line where things become too much, and I can do jobs so long as I keep things under that line. Every now and then… emotion crosses that line and then it becomes emotional, like if I have an emotional connection with a person who's died or with the trauma. (Line 380)*

Participant 10 was very aware of how the training they received as a student, contributed to their own effective trauma management. Participant 10 also expressed concerns that new graduates, who were not trained in the same way, appear to be suppressing the trauma impact. Participants also indicated that job reviews were used as a type of trauma management outlet and coping strategy but this will be discussed later in more detail in the reporting of the Trauma theme. One of the key points that Participant 10 suggests above, is that the new university-based training lacks the benefits of the practical job review training that they received. Participants suggested that the job review training they received as a student is unique to the *practical-based training* program, and that graduates trained under the *theory-based training* programs today, have suppressed trauma impact, which has contributed to students feeling emotionally overwhelmed.

Another of the most commonly repeated benefits of *practical-based training* referred to by participants was how the brief classroom theory that they received as students was followed up by immediate application, and practice on the road, which helped reinforce their learning. Participants suggested that this reinforcement of learning was not only applicable to clinical skills but also applied to emotional and psychological reinforcement working so much 'on the road.' Participants referred to the invaluable knowledge and experience gained as "*road craft:"*

> *Participant 12: It's the road craft that you don't get to learn until you're on the road… the young ones who come out now… it always takes them time to catch up… I think if you're learning bits along the way and then you get to apply what you learned, it's better. The new graduates now all want to rush out and they all want to do the big traumas… and save someone... (Line 270)*

These results do not suggest that *theory-based training* cannot produce paramedics who can work for more than 15 years, but insights from participants do tend to indicate that *practical-based training* was a contributing factor to veteran paramedic's perception of effective trauma management, resilience, and their career longevity. Participants were of the view that many of the *theory-based training* programs in university have not been operating for long enough in some jurisdictions, to determine whether or not their training-based structure would contribute to the effective trauma management and career longevity of its graduates. Many participants expressed the benefits of the *practical-based training* system they received over the *theory-based training* program that students receive today. While there is no empirical evidence to support the perspectives of these veteran paramedic, many of the participants in the current study have been involved in the current *theory-based training* and feel that their opinions come from an informed position:

> *Participant 1: I've talked with some students and there are just some terrible people who are selected to be tutors. They just go into a job and be spoken down to in front of a patient and they should not be in that role cause they've just left a few people scarred. They gotta be careful with the mentors, that's for sure. (Line 671)*

> *Participant 10: ...that's why there are so many problems, students are being taught by people who haven't got a huge amount of experience, and aren't the people who are coming off the road. There are no veterans going in there and teaching students... (Line 372)*

> *Participant 7: Students need to be exposed to more before they're chucked out into the 'Lion's Den.' We have students come out on the road... they work one day a week with a crew for four weeks, I think, it used to be two days but it's only one day a week or something. They're set up for just two days on the course. They need to come out on a Friday and Saturday night so they can see what they're going to be exposed to. They need to see the level of violence and the level of anger that's going to be projected at them. Friday and Saturday nights, public holiday nights, they need to see, everyone is drinking, taking drugs, you know, you have the odd one in the week, but not like Friday and Saturday nights. (Line 634).*

Participants expressed their concerns about the unseen gaps that they believed an over-emphasis on *theory-based training* creates. For example, participants felt that the university environment does not foster the same sense of community among fellow paramedics, as does the *practical-based training*. Participants expressed how the *practical based training* fostered a sense of belonging and closeness, "a family-like environment" where you felt supported through any challenge. Results suggest that for many veteran paramedics, these tight knit relationships with fellow students created long lasting relationships spanning throughout their entire career that still continue to provide vital support today. Many participants expressed the belief that the theory-based training in universities does not foster this same comradery, but actually undermines the foundations of collegial support, through competition for grades and the impersonal environment of university.

Additional benefits of *practical-based training* identified by participants were the smaller group size, fostering a more interactive and intimate environment, a lower teacher to student ratio to improve student learning (Cook, Grady & Long, 2017; Rodriguez & Elbaum, 2014), and the fostering of a *sense of community* and belonging. These beneficial environmental factors identified by *practical-based trained* paramedics were considered to be key factors in the building of long-standing peer support networks. For many participants, the early development of peer and support groups in their *practical-based training* group helped them to establish a *sense of community*, where they could share,

debrief, and more effectively manage work-related trauma. Participants reported that by the time students were exposed to difficult jobs, they already had a colleague-based support network established. With this in place, participants found great benefit in turning to their fellow colleagues for validation and empathy, as they shared similar experiences:

> *Participant 7: …they need to sit down and say, "how do you feel about this" and help you work through it mentally and go, how would you cope with that if you saw this?… 9 and a half times out of 10, you'll find that it will be you and me in that classroom and that's where peoples coping mechanisms start, right there! (Line 1360)*

Participants suggested that the *theory-based training* in university does not provide the same intimate learning environment, for the same length of time, because the large number of students in university classes can dilute the development of close rapport with their teachers or trainers. Participants added that other interruptions, such as changing classes each semester, mixed year classes, competition for grades, and the inability to experience immediate follow up on the road, seriously affected the learning environment of *practical-based training*. The comment made by Participant 12 below helps illustrate this:

> *Participant 12: ...they're friends on the job, they'll hear that you went on a difficult job and they'll come help and say, "oh, I heard you had a terrible job..." so you talk about it a few times throughout the day with your friends... (Line 100)*

> *Participant 12: ...we were a small class... everyone got along and we all bonded as a class, so when we went out there on the road, you knew that there were people out there that you knew really well from that time together in the classroom. I think having that support group in place early makes things easier. We were all on the road together soon after class time because we had such a short school... (Line 330)*

> *Participant 12: I think that if you can get your support network (with peers) in place, even if it's just one or two people... just having colleagues that you can trust and talk to makes all the difference. (Line 338)*

As Participant 12 expresses above, the original training structure and *sense of community* (Walker & Raval, 2017) created by the small group comradery encouraged a strong support network which continues to help them to this day. When class members debriefed with each other about difficult jobs it helped them create a sense of emotional bonding (Marksteiner & Kruger, 2016):

> *Participant 12: …they're quite big classes that come out now, we had 24 in our class so we knew everybody, and we went through together in the induction school. Now, it being in university and everything, I don't think you get that bonding time. (Line 202) I think getting bonding time is important to help you get your group of friends that you know are going to be there for you and you can talk to when you're struggling... (Line 206)*

Participants openly volunteered that *practical-based training* created a natural environment to do more 'on the road' job reviews, which in turn facilitated discussions with mentors and trainers about patient treatment, trauma impact and management after each job. Participants still expressed the need for more education and training about managing work-related trauma. Participants emphasised that even though the *practical-based training* they received provided some limited, impromptu, informal education and training about trauma management, participants still suggested that deficits exist in education and training about work-related trauma impact and management:

> *Participant 4: …a lot of stress comes from a lack of clinical confidence…students need to focus on practicing the skills...if I'm having to do a technique that I'm really not familiar with, that stresses me out...if they cut down on some of the theory and the stuff, that isn't really that applicable,… all the theory is too much, students don't have to learn about the genital crabs cycle. I mean, why do they need to know about this?... Less theory and be more thorough on practical skills. (Line 415)*

Participants expressed concerns about the emotional and psychological well-being of graduates from the *theory-based training* model because they believe students are unprepared to enter the workforce as paramedics. Because of the dominant class time and limited practical time on the road, graduates have not learned the 'road craft' and associated resilience training that naturally occurs from the many variables associated with *practical-based training*. For example, veterans suggest that *theory-based* graduates are not emotionally prepared for the trauma impact due to their shortened practical time on the road and that the real trauma management will only experience from increased time on the road. If veterans are correct that graduates enter the workforce underskilled and lacking confidence, due to their limited exposure to trauma from decreased on the road training, then having a better balance between these two different training approaches could potentially prove beneficial for future students:

> *Participant 7: Where I trained, when students walk out of that classroom, they can do anything that's asked of them because that's the level of training they receive. Students walk out of the training here and they're too scared to do anything, they don't have the confidence because the training program here is extremely woeful. Unfortunately for them, it stresses them out coming out on the road as a student. (Line 1291)*

> *Participant 10: Students are being taught by people who haven't got a huge amount of experience and aren't the people who are coming off the road... We were taught by people who have been around for like 10 or 15 years when I joined.. students don't get that now. (Line 372)*

> *Participant 7: Programs train students here to be scared. They don't train them to be confident because the students come out and they're so scared in the ambulance. Let's just talk about local training. They need to teach their students to be confident in what they do. (Line 697)*

Participants expressed that a lack of education and training about trauma impact and management contributes to the current attrition rates. Several participants suggested that the current *theory-based training* is partly responsible for the extent of trauma impact and dysfunctional trauma management experienced by current paramedics. Participants also suggested that paramedic students in more recent training programs receive little education or training about trauma impact and effective trauma management compared to the training they received as students:

> *Participant 2: …I think the 'old school' training was a lot better than the system now… Why has learning on the job stopped? Political rubbish, that's why it's stopped, they're trying to make more money and save a dollar here and there... (Line 315) I think one of the issues today is in the training... in my day, debriefs were better because they weren't done on the whiteboard, with logic, and theory… It was a sit down, a cup of coffee, have a chat and say, "how did you go?... what do you think?" (Line 613)*

Another advantage identified by participants of *practical-based training* over *theory-based training* was in the development of clinical competencies. Many participants expressed the belief that *theory-based training* graduates were less competent in practical skills than *practical-based trained* paramedics because of the vast differences in practical skills training on the road. For example, numerous veterans expressed a lack of confidence

in the clinical competencies of theory-trained graduates compared to those of *practical-based* students still in training. Not only did participants recognise student clinical discrepancies, but also observed a lack of confidence in new graduates with their clinical competencies. Participants regularly expressed that it would take university *theory-based* students much longer to learn and apply the clinical competencies on the road than *practical based* trained students of the past. These results suggest that students who received university *theory-based training* were considered by veterans to be less road craft knowledgeable, confident, and clinically competent than *practical-based trained* graduates:

> *Participant 2: I learnt good coping skills in my early training days…as I said, old school (training) helped me learn that... (Line 370) ...suicide wasn't a problem back then. If someone had enough with the job, they just resigned... Now people are taking their lives, we're putting too much emphasis on what we do. When I was in paramedic school training was very good but I think now they are absolutely so blind... (Line 403)*

> *Participant 7: The organisation should train up and improve the paramedic competencies so medics can be confident and really know their stuff, that would be better! (Line 1256)*

Such participant comments raise questions about paramedic training credibility and dependability. Training credibility refers to the quality of training that students receive and whether or not it provides the standard of life saving treatment that is required. Training dependability refers to all paramedics receiving the same quality of training, regardless of which year they are trained and which instructors students are trained by. The credibility and dependability of paramedic training is typically overseen by a governing body who helps to ensure that registration processes and regulations meet industry standards. This helps to ensure that all paramedics are capable of delivering the same quality of care and that all patients can expect to receive a high standard of care from any paramedic that treats them. Participants suggested that this lack of governance in the past had undermined the credibility and dependability of paramedics under the *theory-based* training structure and the quality of care they provide to the community:

> *Participant 7: Where I was trained, I was using Ipratropium as intermediate life support ages ago. Here, it's a paramedic drug and we only got it two years ago... (Line 345) I'll normally work through it and get to a point where I know there's nothing else we could have done with what we had, because that's a big thing. Some ambulance services here are centuries behind everyone else in the world. (Line 555)*

As previously mentioned, the lack of *registration and governance* protocols in the past suggests that training did not have a history of being well governed. This in turn could put unfair stress and pressure on paramedics to perform their clinical treatment. It may also have hampered paramedics from providing appropriate information to the general public. Both of these deficits potentially placed paramedic and patient lives at risk. The following participant statements illustrate participant concerns about credibility and dependability in training and the need to help ensure students meet a basic industry standard:

> *Participant 7: I didn't know this until I got here, but I came from an extremely high level of training. I remember when I came here, I took out my stethoscope to listen to someone's chest… You would think I took out a lightsaber, local medics looked at me like I was on drugs. They asked, "what are you doing?" I said, "I'm listening to his chest," they said, "he's got asthma," I said, "no he doesn't, his chest is clear." They said, "No, no, the job card here says he has asthma." I said, I don't care what the job card says, his chest is clear. I thought, oh my word! Then I listened to the patient's heart and I said, "this guy's got stenosis," the other paramedics said, "what? How do you know that?" I said, "He's got mitral stenosis, you can hear it for goodness sake!" They said, "We don't do that! We're not taught that here." (Line 679)*

> *Participant 5: ...training needs to all be kept the same each year… Students come out one year trained in one way, and then they're taught differently by someone else another year… they all need to be trained the same way… the way it's run now, it either makes or breaks students… each course is run by different people and there's SO much difference between graduating classes… (Line 414)*

Some participants suggested that paramedics who received *practical-based training* have been trained better by their mentors to manage trauma than *theory-based training* can provide. This does not necessarily mean that *practical-based* trained paramedics **are** more capable of managing work-related trauma and have longer careers than university *theory-based* trained paramedics, but this is what participants suggested. These results also beg the question of whether or not students who receive *theory-based training* are disadvantaged and un-necessarily compromised, both short and long term, by the training they receive compared to students who received *practical-based training*.

7.4 Summary

In summary, veteran paramedics identified the Training theme as an important contributing factor for their trauma management and career longevity. Results suggest that all veteran paramedic participants in the current study believed that the *practical-based training* they received greatly contributed to their effective trauma management. It was found that the majority of veteran paramedics learned effective trauma management strategies early in their life, or career, which appeared to also contribute to effective trauma management. Many participants also suggested that their effective trauma management was modelled, and instilled in them, by their mentors during the 'on the job' *practical-based training* they received as a paramedic student.

Chapter 8: Trauma Theme

8.1 Introduction

Participant results identified the fifth theme as Trauma. The theme of Trauma referred to any positive or negative influence that working with trauma had on the veteran paramedics. The Trauma theme was divided into two sub-themes, *trauma impact* and *trauma management*. *Trauma impact* is defined as the emotional, psychological, and physiological effects of work-related trauma to which paramedics were exposed (Galloucis, Silverman & Francek, 2000). *Trauma impact* was identified by participants as a variable that greatly influenced participants' ability to manage work-related trauma and their career longevity. *Trauma management* refers to all the effective strategies participants used to help them manage work-related trauma and how this contributed to their career longevity (Oginska-Bulik & Kobylarczyk, 2015).

8.2 Trauma Impact

Results identified nine *trauma impact* elements across all participants which influenced a veteran paramedic's trauma management. Table 8.1 lists the *trauma impact* elements from participants.

Table 8.1

Trauma Impact Elements

Common Elements Across All Participants	No. of Participants
All Paramedics are Affected	12/12
PTSD Symptoms	12/12
Avoidance and Suppression of Trauma	12/12
Cumulative and Compounding Effects	12/12
Frequency, Intensity, Duration	12/12
Job Type	12/12
Personally Relating to Jobs	12/12
Vicarious Trauma	12/12
Paramedic Suicides	12/12

As Table 8.1 illustrates, some influential variables were negative and some were positive. For example, the general acceptance, by participants, that all paramedics are affected by work-related trauma, helped veterans 'normalise' *trauma impact*. On the other hand, some unhelpful symptoms of PTSD were also present, but not enough to incapacitate participants' ability to deliver medical treatment. Examples of the nine *trauma impact* elements, and how participants managed them, are demonstrated by the following quotes:

> *Participant 7: I was speaking to someone the other day and said, "I've seen stuff in my life that you wouldn't be able to imagine in your worst nightmares. Whatever you could conjure up, I've seen worse. I've seen the depravity of human beings and what they can do to each other. I've seen mangled bodies that are left behind and think, how can a human being do that to someone else? That's kind of incomprehensible… (Line 192)*

> *Participant 10: ...some of the scenes I've seen have really affected me… one was a child… what each one (traumatic job) does, is it brings up half a dozen other jobs that I've done over the past 25 years that are similar... (Line 64) ...I remember after a job with one little boy who died, I sat up most of the night thinking about it… I also kept thinking, "I must go to bed because I've got to do this all over again tomorrow." (Line 92)*

> *Participant 3: ...you've got to celebrate the wins and wrap yourself up in that little victory flag and feel nice about it because pretty soon there's gonna come a loss that's gonna come and strip that off of you... It takes four wins to 'outdo' one loss, because that's the pain scale that we relate to... (Line 264)*

The above examples of *trauma impact* help provide an idea of how work-related trauma has affected participants throughout their career. The following nine *trauma impact* elements of; *all paramedics are affected, PTSD symptoms, avoidance and suppression,*

cumulative and compounding effects, *frequency, intensity and duration, job type, personally relating to jobs, vicarious trauma,* and *paramedic suicides* will now be outlined and discussed. *Trauma impact* elements will be accompanied by participant quotes in order to; help the reader understand the participants' experience, to help demonstrate the findings of the current study, and to help provide clarity of relevance to the study's research questions.

8.2.1 All paramedics are affected.

An important element of *trauma impact*, repeatedly expressed by participants, was that *all paramedics are affected* by work-related trauma that they were exposed to. As previously discussed in the Personal sub-theme of *accepting patient outcomes,* and that *all paramedics are affected* by trauma, are both concepts that appeared to help veteran paramedics manage work-related trauma throughout their careers. Participants also identified that accepting too much personal responsibility following a traumatic job was detrimental and undermined their sense of well-being. Participants concluded that all paramedics are inevitably affected by work-related trauma and simply accepted it as an unavoidable by-product of working as a paramedic. This belief was identified by participants as a commonly accepted part of the paramedic culture and a natural consequence of their work. The following participant examples help illustrate this view :

> *Participant 1: ...it's a gamble really isn't it?... aren't we all gamblers? Paramedics, that is, we don't know what we're going out to next, I don't know that I'm not going out to another dead kid and I don't want to see one of them... (Line 582) ...Whoa, that was a big one. That one shook me up for a few days but I still get behind the wheel but I know that I might still see a dead kid. What's to say there isn't one on the next shift? You know, it's kind of a Russian roulette kind of thing. (Line 591)*

The issue that participants appeared to focus on was not how to avoid being affected, but more on the importance of managing the *trauma impact* **when** you are affected. It is also important to note that participants expressed how ignorant and naïve they believe the majority of new graduates are about the effect that working with trauma will have on them. The veterans in the current study regularly commented about how unaware they were early

in their career as students about how much they would be affected, and how naïve they were about the full extent of *trauma impact*:

> *Participant 8: ...when I first started I was pretty naive thinking that I'm not going to be affected. I thought, "I'm just going to help people..." that thought went south pretty quickly… I got affected a lot. (Line 50)*

Many participants expressed that they are all affected by trauma and some level of acceptance about this helps them cope with it until they realise it reaches an unacceptable threshold:

> *Participant 10: I'm fine as long as the emotion doesn't get over the line, I've got a really big line (emotional limitation) here and I stop it from getting over that line... (Line 140) ...I know not to let it come over... I can do jobs so long as I keep things under that line, every now and then, one will come across. (Line 380)*

Participants were unanimous about the importance of fully informing, educating, and preparing students. More importantly, participants emphasised the importance of knowing how to effectively mitigate the impact of work-related trauma to avoid the risk of negative emotional and psychological impact. As part of the acceptance of *trauma impact*, participants also identified symptoms of PTSD, which were also commonly acknowledged among participants.

8.2.2 PTSD symptoms.

PTSD symptoms refer to participant symptoms many of which are consistent with the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; APA, 2000). While no official diagnosis, measurements or assessments of PTSD were conducted in the current study, many participants reported some of the symptoms of PTSD criteria. Participants concurred that some situational circumstances and specific types of trauma exposure, resulted in *PTSD symptoms* appearing after attending a traumatic job.

The majority of symptoms of Acute Stress Disorder (ASD) are similar to PTSD symptomology, but the main distinction between presenting symptoms is the passage of time. Symptoms of ASD are typically present on a short to moderate term basis but if a certain number of symptoms persist long term, the diagnosis changes from ASD to PTSD (APA, 2000). For the purpose of simplification and to help provide clarity, all ASD and PTSD symptomology will be referred to as *PTSD symptoms* because the duration of impact varies so much from one symptom, and participant, to another. All diagnostic PTSD criteria will not be outlined in detail, but some general categories of symptoms include persistent re-experiencing of the traumatic event, persistent avoidance of trauma reminders, persistent reactivity not present before the trauma, with these symptoms persisting for more than one month (APA, 2000). *PTSD symptoms* varied from one participant to another, with some describing more symptoms than others, but all were affected in some way. Participants expressed how they used to carry *trauma impact* as a result of emotional avoidance and suppression, which would affect them until their resilience increased:

> *Participant 8: ...when I got out of my depth with it (trauma impact), my family were the first people I cut off, and my family were the ones I hurt the most. They know me the best and know when I'm struggling. I would think to myself, "I'll hurt you so you stay away and then I don't have to deal with the problem." (Line 369)*

> *Participant 3: ...early in your career, you pick up a lot of trauma packages… like rubbish trucks, where you pick up everyone else's rubbish. We either take it to the tip and dump it, or we just drive around and carry it all the time, and that weighs you down... I'm happy to off load all the rubbish now, whereas before I would carry it around... Now I deal with it a lot easier, I don't take so much on board... (Line 236)*

> *Participant 7: ...medics can't afford to be so arrogant to believe they won't be affected. It WILL catch up with them, it's caught up with me at times. I used to sleep one to three hours a night... Last year I had some horrible flashbacks, still do sometimes, but I've moved through them. (Line 619)*

As the above participant quotes demonstrate, they were not only aware of how the trauma was affecting them, but they were also aware of the negative consequences of carrying *trauma impact*, and the need to cease holding onto the *trauma impact*. Participant 3 below explains this in more detail:

> *Participant 3: ...just concentrate on your job, on yourself, and don't carry the trauma. Only carry what you need to carry to learn from it… once you've learned from it, get rid of it. There's no point carrying around those jobs... it's just rubbish that's going to weigh you down… (Line 283) ...concentrate more on learning skills to off load the trauma…learn how to be emotional and admitting something has affected you … No one wants to stand around constantly feeling overwhelmed… … forget about the belief that it's not manly to talk about it… Medics need to stop and think, "hang on, I'm having a melt down here…that job hurt me... I need to address it." (Line 316)*

Despite the results suggesting that all participants experience symptoms of PTSD in some way, all participants also learned ways to mitigate the implications of these symptoms. For some, these management strategies were taught in the home by parents, while the large majority were compelled to learn these strategies on the job, as they struggled through each difficult experience throughout their career. As previously mentioned, the persistence of working through the *trauma impact* contributed to the *PTG* that helped them become more resilient. Results suggest that *avoidance and suppression* of trauma impact undermines trauma management and career longevity, compromising the individual more.

8.2.3 Avoidance and suppression.

Results found that participants readily expressed how early in their career they, and many of their colleagues, used *avoidance and suppression* strategies as an unsuccessful coping strategy. Many expressed that the suppression of *trauma impact* was part of their training and outlined how they were taught to avoid and/or suppress the emotions which can arise during a trauma situation so they wouldn't 'freeze' during a traumatic job. The following comment made by Participant 6 illustrates this point:

> *Participant 6: I spoke with one junior paramedic who went to a really nasty accident and as soon as she got there and saw the person's face was damaged, she said, "all I could see was blood and I couldn't move." I knew what to do, I knew that I needed to do it now," but she said she couldn't move because she hadn't experienced that kind of trauma before. (Line 914)*

The above statement by Participant 6 describes a junior paramedic's inability to provide the life saving treatment required, because the shock of seeing something she had never seen before rendered her incapable at that moment. Whilst the initial *avoidance and suppression* of *trauma impact* is important to help facilitate the delivery of life saving treatment, participants expressed that they did not receive any training about the importance of expressing and reconciling the suppressed trauma after the job was over. Results suggest that the emotional *avoidance and suppression* training that paramedics receive to help them avoid 'freezing' in a trauma situation, may be partially responsible for the *trauma impact* that they experience. Results also suggest that a culture of *trauma impact avoidance and suppression* exists within the paramedic profession. As previously discussed, the origin of emotional *avoidance and suppression* from *trauma impact* is likely to be historically founded in the military fields of battle. Results suggest that when it comes to managing *trauma impact*, training paramedics to avoid and suppress it for the purpose of providing medical treatment to patients, may help the patients in the moment, but eventually harms the paramedic, the paramedic industry, and may potentially compromise their future medical treatment of patients. Participants emphatically expressed the need to be proactive in expressing the *trauma impact* and not to suppress it:

> *Participant 3: Find someone you can relate to and off load to them. If you've got stuff that's weighing you down, off load whatever you can. It doesn't mean that you're putting your package on to someone else and it's no longer yours, you're just sharing the load. Getting understanding, right or wrong, from someone else, and also validation. (Line 533)*

> *Participant 1: You gotta be ready to talk, you gotta be ready to let it go, you gotta be ready to face it and to go through the shitty feelings that are gonna come up. (Line 651)*

> *Participant 2: …the first thing I've learned in my life is to talk about it. To get it out and say it rather than come home and kick the dog and punch the wife or hit the alcohol and all that sort of stuff… (Line 250)*

> *Participant 10: ...get it out. Don't bottle anything up, whether it's a personal relationship or a work thing or whatever, it doesn't do any one any good. So, sometimes it's hard to talk and find the person you can talk to but medics need to get it out and talk to someone they trust. (Line 267)*

Each respective veteran paramedic learned the detrimental effects of *trauma impact avoidance and suppression*, and the importance of reconciling the suppressed emotional impact, through the trial and error of their own experience. Many participants expressed that learning coping strategies, such as these, only began to develop after they had worked more than 10-years in the profession. The avoidance and suppression that paramedics used to cope and function contributed to negative cumulative and compounding effects of trauma.

8.2.4 Cumulative and compounding effects.

The *cumulative and compounding effects* of *trauma impact* were identified as contributing factors associated with how participants effectively managed work-related trauma. Results suggest that participants made distinctions between *cumulative and compounding effects* of *trauma impact*. The *cumulative effects* of *trauma impact* refers to the repetitive suppression of emotion from the increasing **quantity** of traumatic jobs. Participants reported that the *cumulative effects* of *trauma impact* can build up over time. The accumulation of *trauma impact* can remain steady, with no increase of impact intensity or growth, to the point of incapacitation.

Cumulative effects may not necessarily result in the *trauma impact* of paramedics intensifying, but participants suggested that the *compounding effects* of trauma is what seemed to intensify. Participants described the *compounding effects* of *trauma impact* as the increasing intensity that builds over time. Participants illustrated the *cumulative and compounding effects* of trauma in the following ways. Several participants expressed the *trauma impact* of attending jobs where a child has died, such as a job involving SIDS (Sudden Infant Death Syndrome). While each subsequent job involving SIDS may affect the paramedic, the frequency of attending SIDS jobs may not necessarily increase the intensity of how they are affected. If this same paramedic attends a job where a child has died in a more traumatic manner, the overall impact of attending jobs involving child deaths could intensify, or compound the effects of the past SIDS incidents, resulting in greater *trauma impact*.

Some participants expressed the fatigue associated with the *cumulative effects* of *trauma impact,* and how this tiredness would prevent them from having the desire or capacity, to put in the necessary effort to reconcile the *trauma impact*. Research suggests that high levels of emotional effort, referred to as emotional labour, can result in emotional, psychological, and physical fatigue (Blau, Bentley, Eggerichs-Purcell, 2012), especially among paramedics (Jennings, 2017). As time goes by, participants reported that the *cumulative and compounding effects* of working with trauma felt too big, and too overwhelming, to try to reconcile. Over time this resulted in the deterioration of the emotional, psychological, and physiological functioning of the veteran paramedics. This is relevant because veteran paramedics both identified the negative impact from trauma, and were able to sufficiently reconcile it to effectively manage it and continue working.

Many participants expressed their awareness of the *cumulative and compounding effects* of working with trauma, and for some the full effects were not realised until many years later:

> *Participant 7: …most of the time I went from one traumatic job to another, to another, to another, one on top of the other. So, the adrenaline rush kind of got me through the emotion... you're constantly on that adrenaline rush because you don't actually get a chance to come down off it. So for 25 years I lived on that adrenaline rush... (Line 150)*

> *Participant 7: One time we had a debrief after a job and three or four guys actually broke down crying... (Line 157) ...you kind of stay up there and never ever come down because you never have a chance to come down. I think that's why things are impacting me so much now, they're catching up… I can sit back here in this city, where the work is easy… So now my mind now has time to start processing things that I have seen over the past 25 years. (Line 165)*

The *cumulative effects* that Participant 7 referred to occurred over a 25 year period, without a chance to reconcile the trauma. The intensity of the *trauma impact* didn't necessarily increase or compound to the point of incapacitation, but the *cumulative effects* were still waiting for them to resolve 25 years later. There are three interesting insights to note from Participant 7's comment above. First, cumulative *trauma impact* was not reconciled with the passage of time, but was patiently waiting to be addressed and surfaced when they had time to address it. Participant 7 never had the downtime to actively reconcile the *trauma impact* and they were aware of the cumulative impact taking place. Second, these results suggest that they had the *EI self-awareness* to be cognisant of the cumulative impact, which helped them effectively manage it on some level and continue working. Third, Participant 7 continues to effectively work after 25 years, despite the *cumulative effects* of working with trauma.

Such results suggest that even though cumulative trauma is difficult to experience, the trauma impact is manageable when paramedics have effective coping strategies in place. To effectively manage *trauma impact*, veteran paramedics become aware that it returns if not dealt with properly, so when trauma affects them, they have learned to address it as soon as it comes up, so it can be reconciled. The following comments by participants show how cumulative and compounding trauma resurfaces when it isn't dealt with:

> *Participant 10: ...paramedics have to resolve it (trauma impact), that's what I've done a few times. I've gone to see a counsellor because I've realised, "this is really big and I don't want this to affect me in five years time, so what do I have to do?" (Line 348)*

> *Participant 8: Well, I can tell you it builds up, because that was a lot of what I did… it actually snowballed on itself... I started looking for the negatives in every single job I did and I said to myself, "that is what you did wrong. If you were a better paramedic, you could have done it that way, you could have done it that way"… it became this self-fulfilling prophecy of, "you did that wrong, bad job, bad paramedic." (Line 306)*

> *Participant 3: If you have a difficult job, talk to me about what you feel, what we could have done, or how you wanted the job to go… So if that stuff rides up again, we can deal with it... (Line 612) ... it's our emotional state that we need to review… I need time to process this, right now. (Line 720)*

> *Participant 9: ...it's only started having a cumulative effect on me for the past four or five years. (Line 59)*

These results suggest that the *cumulative and compounding effects* were well known by veteran paramedics, as well as the importance of reconciling *trauma impact*. The self-awareness and proactivity also appeared to be a contributing factor of effective trauma management. Just as the *cumulative and compounding effects* of trauma contributed to *trauma impact*, the frequency, intensity, and duration of trauma exposure also contributed to *trauma impact* (Milligan-Saville et al., 2018).

8.2.5 Frequency, intensity and duration.

Another influential variable under the theme of *trauma impact* was the *frequency, intensity* and *duration* of exposure to work-related trauma. *Frequency* refers to how often participants were exposed to a traumatic event. For example, a paramedic who works in a big city, such as New York in the USA, is likely to attend many more jobs in any given day, than a paramedic who works in a small rural community in Australia. The higher *frequency* of jobs attended each day, the greater the risk of trauma exposure and increased possibility a paramedic could be negatively affected by patient trauma. *Trauma impact* results also found that the *intensity* of a job was an influential factor. *Intensity was* defined by participants as how emotionally and psychologically taxing a traumatic event was. Participants outlined that priority one calls are the most intense and life threatening jobs, warranting lights and sirens enroute to the location. Priority two jobs are typically moderate *intensity* and priority three calls are typically the least intense, non-life threatening jobs.

Participants identified that the large majority of jobs they attend are not life-threatening and are low priority. For example, a call to attend someone who falls and hurts their wrist is typically not considered a life threatening injury and would likely be considered a priority three job. Participants expressed that a wide variety of priority one calls exist, which are the jobs that typically create the greatest risk of *trauma impact*. For many participants, the *intensity* of a job was influenced by many additional factors, such as; the type of job, if they could relate to a job in their personal life, and what their past experience was with trauma.

The *duration* of a job was also identified by participants as a variable that greatly contributed to *trauma impact*. Job *duration* was defined by participants as how long they remained in a heightened state of emotional, psychological, and physical arousal. For example, an intense, multiple vehicle accident with multiple patients, with life-threatening

injuries, could last a number of hours, before a paramedic hands a patient over to hospital staff in an emergency room. The duration of a sustained state of emotional, psychological, and physical arousal was identified by participants as very emotionally, psychologically and physically tiring. The following participants demonstrate examples of *trauma impact* through the *frequency, intensity, and duration* of trauma exposure:

> *Participant 1: ...if you work in a big city where there is a lot of trauma, there's gonna be a lot of things to work out, but not here locally. I went years without seeing a dead kid, I couldn't do it if I was seeing a dead kid every month...that would mess me up. (Line 617)*

> *Participant 8: ...there's a lot of robberies and murders where I worked before… it was trauma central, which was pretty nasty, and motor vehicle accidents were frequent and when cars crash, it sprays about 10 to 12 people across the road, so you frequently dealt with that. (Line 68)*

> *Participant 2: …we all started that way, the more we saw, the worse the confidence became. I thought, "Oh my goodness I don't know anything like I thought I did." (Line 282)*

> *Participant 3: ...if they keep banging all this trauma into me, and it all gets ignored, it gets carried across to the next job, and then it snowballs... Just like a little bush fire, if I don't sort it out now… then it is gonna be an out of control forest fire by the end of the day… (Line 726)*

Participant 3 in the above quote describes the implications of not having time to reconcile trauma after each event and compares their emotional state of suppressed *trauma impact* to a raging, out of control forest fire. This statement made by Participant 3 identifies many contributing factors to their effective management of work-related trauma. First, that they have the *EI self-awareness* to recognise that they are emotionally and psychologically

compromised by trauma. Second, they have learned through personal experience how the frequency of suppressed trauma affects them. Third, that the *trauma impact* must be addressed and cannot be left unresolved or it will lead to negative *cumulative and compounding effects* for themselves and future patients. Participant 3 has learned to set boundaries of self-care and is not willing to let the organisation push them. Neither are they willing to push themselves beyond their emotional and psychological limitations, to a compromised state. All veteran paramedics appeared to have mastered this boundary setting process of self-care and protection. Participant 11 below reiterates the need for *self-awareness* of *trauma impact frequency* and the setting of self-care boundaries:

> *Participant 11: …if I have done a big job, I don't 'clear,' which means you push the button to say I'm ready for another job. I don't 'clear' until I'm ready and I'm sorry if that's going to take 20 minutes, if it takes 40 minutes, management will just need to suck it up because my well-being is more important… we'll talk about how things affected us and we won't 'clear' until I feel you're ok to do another job and if it takes a while, then it takes a while. (Line 251)*

Participants not only clearly identified their awareness of *trauma impact frequency*, but were also aware of what they did to cope. The *frequency, intensity and duration* of traumatic jobs were individually identified as significant contributing factors to *trauma impact* for participants. Unfortunately, the job description of a paramedic is typically synonymous with high exposure to all three of these factors on a regular basis, especially in cities with large populations. In the current study, the results suggest that veteran paramedics had developed an acute awareness of the *trauma impact* associated with the *frequency, intensity, and duration* of exposure. This awareness was identified as a key contributing factor that helped to effectively mitigate *trauma impact* in veteran paramedics. Veteran paramedics emphasised the importance of self-monitoring. In the self-monitoring and self-regulation process, results suggest that participants were able to identify when they were being affected, how they were being affected, what to do about it, and how to control *trauma impact* through the self-care process.

Participants identified that personal confidence is needed to establish these types of self-care boundaries, many of which only come with time and experience in the job, and is generally not developed within the first five years of a paramedic's career. Another *trauma impact* variable that participants identified with the *frequency, intensity, and duration* of trauma exposure, was the management and allocation of jobs that they received from the organisation. The fatigue from trauma exposure was strongly connected with the allocation of jobs, especially when a traumatic job was followed by a low priority job. For example, a priority one job (high risk to life) followed by a low priority job (low risk to life), may be seen by some as a helpful strategy to help paramedics recover from a traumatic job. Many participants reported that a low priority job after a priority one creates too dramatic of a drop in job speed and mood, making it worse than getting another priority one or a priority two job. The following participant quotes help to illustrate this point:

> *Participant 6: ...when you take somebody into a major trauma hospital, it's all go! You pick somebody up and you're working your butt off in the back of the ambulance. You get them to the hospital, 30 odd people are jumping all over them and then you do your paperwork… you're immediately thrust onto the next job and if the next job is a very low priority job then you've gone from high excitement and physiological and psychological demand, to a job that's a real downer. That causes so many problems… Everybody gets so angry (Line 1019)*

> *Participant 7: …the adrenaline rush kind of gets you through it (trauma impact) and you're constantly on that adrenaline rush because you don't actually get a chance to come down off it… You never ever come down because you never have a chance to come down. I think that's why it's impacting me so much now... because the work here is so much slower... (Line 172)*

As the above participant comments demonstrate, a degree of *trauma impact* came from adrenaline fatigue over long periods of time. Again, veteran participants were aware of the *trauma impact* that job allocation had on them and were able to reconcile the effects this had. Another *trauma impact* result identified by participants was regarding job type.

8.2.6 Job type.

Job type was the next *trauma impact* variable that influenced paramedics' ability to manage work-related trauma. *Job type* was defined by participants as the type of jobs paramedics attended that had different degrees of *trauma impact* associated with them. Some jobs were identified as creating more *trauma impact* for some participants than for others. Participants identified that different jobs affected them in unique ways but some jobs were considered difficult by the majority of them. The following participant quotes provide examples of how job type influences the *trauma impact*:

> *Participant 1: It's one of those jobs where no one is going to question you because they know it was a dead kid... (Line 215) That one shook me up for a few days... (Line 591) ...I had to take some time for that one and I thought, "Mum was drunk, they had both been drinking… You should know that you don't lie next to a baby on a bed when you've been drinking, that's just freaking stupid, you know?" (Line 609)*

> *Participant 3: ...my bad jobs, um, 30 babies. Babies in swimming pools… (Line 132) ...or telling an 18 year old mother that the baby she's given birth to three weeks ago, will never wake up… (Line 144)*

Participant 1 above suggests that the consensus among paramedics is that the large majority of them are affected by jobs involving child deaths. Colleague deaths was also identified by participants as another high *trauma impact* job type that affects them:

> *Participant 7: I remember going to a job that my work colleague was involved in. He was with his entire family in the car when they were involved in an accident and his whole family were killed. His two kids, his mother, father, and his aunt, who was in the back of the car. He survived and was conscious, but trapped in the car. He kept on saying, c'mon guys, tell me, why are my kids not talking to me? They're dead aren't they, they're dead? It was difficult to do that job because you knew that he knew. He was your colleague, you worked with him and he knew the strategies we used to keep people calm and in the dark, so he knew. I'll never forget that day, you will never forget those things. (Line 212)*

Participants also identified cultural and geographical differences that influenced the types of jobs they attended, which also contributed to the type of impact that trauma had on them. For example, participants who had worked as a paramedic in other locations throughout the world very rarely attended suicide jobs from hanging. Working in Australia, where suicide by hanging is much more common, paramedics arriving from other geographical locations were more affected than local paramedics, who are accustomed to attending these types of jobs. Participants expressed that some motor vehicle accidents (MVA's) can be quite graphic and emotionally unsettling for some paramedics, while others were more affected by jobs that contradicted their values and beliefs, such as attending graphic murder-suicide jobs:

> *Participant 10: I'd say there would only be a handful of really difficult jobs. The most recent one was a few months ago. It was the most horrific scene I have seen in 25 years. A guy driving a car came across the lane and hit a truck. He was spread all over about 50 metres and he was all tangled up. I was walking up to see the driver and I saw… bits of brain and things all over… there was a hand on the ground...there was human matter everywhere. (Line 36)*

Participant 8: …the job that really sort of sticks with me was a family murder... we got called to this house and this man was in the darkest part of his life and had a lot of major issues. People had been trying to get a hold of him that morning and couldn't, so a family member went over to the house... When we arrived, the family member was so upset and said, "he's in there." So we're going in expecting one patient… He had killed himself and his whole family throughout the rest of the house… (Line 96) ...I could never put that to bed because it sort of spun me out that somebody could do that to the people he had created. (Line 122)

These results suggest that the types of job participants attended, influenced the extent of *trauma impact* they experienced. The jobs with the greatest *trauma impact* were severe damage to patients' bodies, attending jobs with child deaths, and those that confronted the participants values, ethics, morals and beliefs. Another variable that contributed to *trauma impact* was how closely participants personally related to jobs they attended.

8.2.7 Personally relating to jobs.

Participants expressed that jobs affected them much more when they could relate to the circumstances, a patient, or to the patient's family. Participants who did not relate to jobs found trauma easier to manage and therefore experienced less *trauma impact*:

*Participant 1: When you go to a job and you can relate to the people… nice people, clean house, not doing drugs, and some bad stuff has happened to them. You feel for them, and when its tragic, you just see the look on their faces and you know it's hard, you can relate to that a lot more... (Line 70) ...Some of the worst jobs I've been to were drug addicts ...**not** trying to help themselves, I can't relate to that... it's easier to brush things off because...you know they're going to go out tomorrow and take more meth, and steal more things and it's easier to pass those off… So it's the jobs that I can relate to that affect me more. (Line 79)*

For Participant 1 above, it was the similarities of life circumstances to their own for which they had more empathy and compassion, that resulted in more *trauma impact*. On the other hand, it was easier for them to discount the *trauma impact* on jobs that they could not relate to, which helped them to 'brush off' its effects. Paramedics who were parents found jobs involving children particularly difficult, like participants 7 and 12 below:

> *Participant 7: Resuscitations of children are always the worst or accidents with children or when you recognise the people in the car. Where children have died and the adults have survived or vice versa. We don't have those kinds of accidents here, not on the scale that we had them where I'm from. Here, you'll only have one or two a year and that will be statewide. Where I'm from, you're guaranteed one every single weekend, without fail. (Line 107)*

> *Participant 12: ...it wasn't so much the boy dying as much as the dad's reaction that got to me. Then you start thinking about this and relating it to your own family and I think that's when I've got to stop and think, "It's not my family, you can't attach those emotions, you have to stay objective, otherwise you'll become a basket case on the job and you'll take it all on board." (Line 80)*

For some participants, *trauma impact* can change from very manageable to unmanageable, once they have children. Participant 12 below commented on how much more affected they were after they had children:

> *Participant 12: …it's the personal jobs that you can relate to that get to you the most… Before I had kids I did a few SIDS jobs and worked with guys who had kids and they would be a bit emotional and have a bit of a cry sometimes. It was really sad but I didn't quite connect with that until I had my own kids. Then I was like, oh my goodness, don't give me a SIDS job, I don't know if I could cope with it! Well I did, and I re-lived all my past SIDS cases...After a job with kids, I would constantly go and check on my own kids while they were sleeping to make sure they're ok. (Line 60)*

As Participant 2 above suggests, the more a paramedic can relate to a job, the greater the *trauma impact*. It wasn't until Participant 2 had children that the SIDS incidents had a greater impact and they became vigilant about checking on their own children at home as they slept. Participant 3 below, felt more empathy and compassion for the parent of a child who had died because they had children of their own:

> *Participant 3: ...as a parent myself, looking in the mother's eyes and telling her… "I'm sorry but your baby has died." The crushing feeling I had, knowing that I've just destroyed this person with those words... that's the hardest part I find with my job. It's not so much doing the job, it's talking to the grieving people, the relatives. (Line 145)*

As stated above, it was more difficult for Participant 3, as a parent can relate, to tell another parent that her child had died and manage the associated empathy, which affected them more than doing the actual job. Another example of *trauma impact* from relating to traumatic jobs was by Participant 9:

> *Participant 9: ...when my son was two, I went on a job to a non-breathing two year old... I plonked my kids face on the child we responded to, so it was probably the first time I personalised the job... (Line 103) Another time I was driving and I had a junior ambulance officer with me… she just looked at me and said, "I can't do this," so I said, "Ok, when we get there, we'll swap roles..." After that, I went home and held my baby... (Line 149) ...I held my kid a little bit tighter for a couple of nights after that. (Line 159)*

The above participants were cognisant of how they felt about these jobs and the additional impact they experienced because they could relate. Results suggest that participants were cognisant of *job type* influencing *trauma impact*, and had learned how and why it affected them, as well as knowing what to do about it. Veteran paramedics demonstrated how their management of *trauma impact*, through *job type,* contributed to effective trauma management and to the longevity of their career. Another *trauma impact* contributing variable identified by participants was *vicarious trauma*.

8.2.8 Vicarious trauma.

Vicarious trauma is defined as the indirect, emotional and psychological impact, as the result of observing the effect of trauma on others (Branson, 2018). Examples of *vicarious trauma* situations identified by participants were; observing the *trauma impact* of suffering patients, observing the grief and loss of the family members of patients, and witnessing the *trauma impact* and its effects on colleagues. Participants identified the negative impact of *vicarious trauma* over time and were aware of the impact on both themselves and their colleagues. The following examples help illustrate the *trauma impact* on participants from *vicarious trauma*:

Participant 11: ...when processing it I think of the poor family and how they're going to cope with the loss. It's their grief that I feel more affected by, not the actual dead person in front of me. Anyone that is seriously injured I feel for too because you know they've got a long road of recovery ahead of them... I try not to give them all that information because they're already overwhelmed with what they're dealing with, the pain and everything... (Line 56)

Participant 12: ...it was the emotions from the parents as they lose children and things like that. That grief that you hear from them affects you because it's so primitive and deep, that sound haunts you a bit… (Line 72) ...another job was seeing the dad's pain of seeing his son like that… that sort of stuff plays on my mind a bit, the image of seeing dad's grief… those jobs can hang around for a while... (Line 76) ...it wasn't so much the boy dying as much as the dad's reaction that got to me. (Line 80)

As the above examples demonstrate, in some situations participants were more affected by observing the grief of others than by the traumatic job they were attending. These *vicarious trauma* results also suggest that participants experienced two levels of *trauma impact*. The first level was the direct contact with the traumatic event and the patient they treated. The second level was the *vicarious trauma* they experienced was the indirect contact with the traumatic event, as outlined in the above participant quotes. These two different *trauma impact* factors are important to note because *vicarious trauma* has been identified as a debilitating consequence of indirect exposure to trauma (Cohen & Collens, 2013). These results suggest that paramedics can be traumatised in two different ways, for each work-related traumatic event. If paramedics are at risk of being traumatised both directly and indirectly from work-related trauma, then results suggest that veteran paramedics are aware of these both levels of this risk and have learned to mitigate the associated impact. How participants learned to effectively manage these *trauma impact* factors will be outlined in the next *trauma management* section. Another *trauma impact* variable identified by participants was the incidence of suicide among colleagues.

8.2.9 Paramedic suicides.

As mentioned earlier in this dissertation, some statistics and studies suggest the incidence of suicides within the paramedic workforce is much higher than the general Australian population (ABS, 2015). Participants identified jobs involving child deaths, colleague deaths, and personally relating to a job, as **the** most traumatic types of jobs they attended. The *trauma impact* of suicide was not included in the *trauma impact* factors of *job type* and *personally relating to jobs* because participants proposed that there were multiple contributing factors to paramedic suicides.

8.2.9.1 Multiple factors contribute to suicides.

Results suggest that multiple factors contributed to *trauma impact*, and how it was managed and participants identified many variables that they believed were associated with the incidence of suicide among the local paramedic population. The topic of paramedic suicide was frequently mentioned by participants throughout the interview process. Participants never questioned whether or not work-related trauma contributed to suicide among paramedics, but instead identified the variance of impact from one paramedic to another. The question posed by many participants was, what proportion of work-related trauma contributed to paramedic suicides? Many participants personally knew many of the local paramedics who had committed suicide over the last 15 years. Results suggest that the most prominent contributing factors to paramedic suicides, in addition to work-related *trauma impact*, were pre-existing risk factors prior to becoming a paramedic. The most relevant results associated with paramedic suicides were the suppression of long-term unresolved *trauma impact*, personality variables, organisational issues, and pre-existing risk factors. The following participant quotes help demonstrate these aspects:

> *Participant 3: Very few medics that I know in the job will go see psychologists, psychiatrists, whatever, to work through their trauma, that's why we end up with dead paramedics who suicide… we all know that no matter what, if that four letter word of PTSD is ever expressed about us, then our career's over… If our company ever gets wind of it, our career is gone, and that's why we don't use our own system... (Line 738)*

Participant 2: I think the roles of the paramedic have grown so big that we're fraying on the edges and these are the suicides you talk about, and the discontent, the stress and the like... suicide wasn't a problem back when I was a new medic Line 404).

Participant 1: I knew one of the people who suicided… I don't think it was from the job… I would say that was from their personal life, which was upsetting… they were a character to begin with, an affected character… they were hard to work with and not really suited to the job. (Line 710)

Participant 3: That's for me personally, and I know about a dozen others that won't go through our internal system for support. We know that a report is automatically generated and if it comes up with PTSD… that's almost as bad as you having seizures or you breaking your leg. If you're not functional, they will stand you down because they (the organisation) think... that's an invisible little force that will pop out of nowhere... (Line 741)

The comment from Participant 3 talks about how unresolved *trauma impact* contributes to paramedic suicides, as well as some of the reasons why some paramedics avoid seeking therapeutic support to help reconcile their *trauma impact*. Underlying general fears of seeing a psychologist, receiving a PTSD diagnosis among the paramedic population, organisational issues, and fear of job loss, were identified as a few contributing factors to paramedic suicides:

Participant 4: I know the incidence of suicide higher amongst ambulance workers than the general population… I knew a few of the medics that have died… There were other issues at play with all of them... (Line 955)

> *Participant 4: One paramedic who took his life was a complete perfectionist… Everything had to be just right, they'd be an hour early to work, checking everything and making sure that everything is going to be ok…but it can't be like that, you can't do everything... every time... maybe over the years that got to him, he was a complete perfectionist. (Line 983)*

While participants acknowledged the numerous variables that contributed to paramedic suicides, many expressed anger and resentment about suicide investigations and reports minimising or discounting the influence of work-related trauma. Participants expressed their resentment toward the notions suggested by organisations and independent reports, that work- related *trauma impact* was not considered to be a significant contributing factor. Many participants suggested that of all the multiple contributing factors at play, the long term effects of working with trauma was the largest contributor and the tipping point:

> *Participant 6: …we've had a number of colleagues suicide… none of them would I consider to be 100% job related... (Line 536) ...Heaps of other factors contributed to the suicides…one died in a fairly dramatic fashion, but they were wound tight as a drum from the day they walked into the job… a coiled spring waiting to explode... (Line 545) ...another medic was already likely carrying some PTSD when they came into the job..., they were very isolated… not doing particularly well in the job... (Line 550) ...other medics rang me because the suicides upset them. (Line 558)*

Many participants expressed how organisations were very avoidant of taking any responsibility for their employee suicides, how poor their duty of care was for paramedics in their organisation, and how many of the suicides could have been avoided with better education, training, support, and improved duty of care. These *trauma impact* results about paramedic suicide suggest that paramedics were affected for a combination of reasons, the majority of which have already been discussed as *trauma impact* variables. In summary, the *frequency* of suicide among paramedics was identified as an influential variable of *PTSD symptoms*, trauma *avoidance and suppression*, the *cumulative and compounding effects* of trauma, *job type*, *personally relating to jobs*, and *vicarious trauma.*

Results suggest that the more paramedics are exposed to the suicide of their colleagues, the greater the risk of increased *trauma impact* and the more difficult it becomes to emotionally distance themself from death and considerations about their own mortality. This heightened *trauma impact* could contribute to more *PTSD symptoms* which in turn could result in more *avoidance and suppression* of the confronting nature of their colleague suicides. These factors, compounded by the potential *vicarious trauma* of observing friends, family and colleague grieve the loss from suicide, further complicate and compound the *trauma impact*. While the above *trauma impact* variables are numerous and can be complex, veteran paramedics have nonetheless demonstrated their ability to effectively adapt and manage this long-term. Just as results found there to be *multiple factors contributing* to *trauma impact*, results suggest that veteran paramedics utilised multiple coping strategies to help mitigate its effects.

8.3 Trauma Management

Trauma management is the second Trauma sub-theme to report and discuss. The veteran paramedics' experience of managing work-related trauma has been the focus of the current study. By virtue of remaining in their career for more than 15 years, veteran paramedics seemed to demonstrate some degree of effective *trauma management* strategies. Results tend to indicate that effective *trauma management* was a combination of specific *trauma impact* outlet strategies, as well as emotional and cognitive processing strategies. The *trauma management* elements identified by veteran paramedics in the current study were considered to be the key elements of how veteran paramedics managed work-related trauma on a day-to-day basis. The majority of participants identified very similar strategies that helped them mitigate the *trauma impact* that they experienced. The effective management of trauma was identified by participants as a vital element that influenced *trauma impact*. Even though many common *trauma management* strategies were identified across all participants, each respective veteran paramedic had their own unique variations for the same type of management strategy, and not all participants used the same strategies. Participants expressed that they did not enter the job with all these strategies already in place, but that they learned, developed, and refined them over time, often by a process of trial and error.

Each participant had either consciously or unconsciously learned effective *trauma management* strategies from their own early career training process. Participants learned these through forced adaptation to cope with work trauma, or from their own conscious learning and development process, over time. The effective management of trauma appeared to be a very fluid process, which was constantly being refined and adjusted to suit different situations. Participants had learned to change to different similarly effective management outlets, to help them manage the *trauma impact*.

Before outlining the details of what effective *trauma management* strategies veteran paramedics used, the sub-themes of *EI and PTG* must first be reiterated as sub-themes from the Personal theme. Due to the reiteration of these sub-themes, they will only be briefly discussed as relevant to veterans effective *trauma management*. The constant *self-awareness* of which coping strategies were more effective than others, was identified by participants as a crucial part of their trauma management process. The constant monitoring of needs and outlet adaptation contributed to an increase of *EI self-awareness*, which in turn, helped increase the monitoring of needs and outlet adaptation. This 'real time' *trauma management* adaptation changed according to different circumstances, and exemplified the *EI* previously mentioned. *Trauma management* results also suggest that both *EI and PTG* were contributing factors to effective *trauma management* for participants.

8.3.1 The influence of EI and PTG in trauma management.

Emotional Intelligence (*EI*) and *Post Traumatic Growth* (*PTG*) were both discussed in previous sections of this dissertation, but were important to reiterate as fundamental aspects of effective *trauma management*. *Emotional Intelligence* helped participants recognise *trauma impact* within themselves, understand to what extent they were affected and know which coping strategies were needed for different types of *trauma impact*. This *EI self-awareness* was identified as a vital component that helped veterans feel confident, and sufficiently empowered to manage work-related trauma, which in turn, contributed to the longevity of their career.

Post Traumatic Growth (*PTG*) was also identified as a key contributing factor to effective *trauma management*, because the more participants grew, as a byproduct of working through trauma, the stronger and more resilient they became to subsequent work-related trauma with patients. Participants reported that their personal development,

and learning after each subsequent traumatic event, became increasingly more manageable than the previous one. Participants suggested that this, in turn, created a greater and much more sustainable capacity to effectively manage trauma. For these reasons *EI and PTG* were identified by participants as two of the greatest contributing factors of their effective *trauma management* and career longevity. At the other end of the *trauma management* spectrum, the absence of *EI and PTG* was identified by participants as an undermining factor to resilience, which contributed to an increased risk of *trauma impact* and the emotional and psychological challenges that paramedics face. To what extent *EI and PTG* contribute toward trauma mitigating factors is unknown and much more paramedic research is required to explore this area. Another important consideration, which was not identified as a *trauma management* element but was identified by some participants as an influential variable, was an individual's personal *life trauma* history.

8.3.2 Personal life trauma.

Past experiences with trauma was identified by some participants as an influential factor to consider when evaluating a paramedic's ability to effectively manage work-related trauma. For example, research suggests that people who have experienced substantial amounts of trauma in their childhood and teenage years, are at greater risk of re-traumatisation than a person who has not experienced early life trauma (Keller-Dupree, 2013). Some participants were reminded of a traumatic childhood experience when attending to a job which created some kind of reminder about a personal life trauma from their past. For example, one particular participant experienced the loss of a very close family member as a child, which was a very traumatic experience for them. This participant often remembers this traumatic event when they attend similar jobs. Other participants recognised the trigger of observing the grief of a patient's family members, or hearing about the loss of a family member by anyone in their social network. Some participants suggested that the *personal life trauma* participants experienced, and how they managed it, contributed to the *trauma impact* they experienced on the job. For many participants, reconciling past personal trauma experiences such as this, contributed to the foundation of *PTG* and later contributed to their ability to effectively manage work-related trauma:

> *Participant 6: A colleague and I were working together and attended a job that left us both re-traumatised from our own past events... that past just made the job we attended so much worse… I kept wondering how my crew mate was going to react if the job turned pear shaped because of their previous history. All this was swirling around in my head so, without question, that was the worst day of my ambulance career. (Line 100)*

> *Participant 3: I come from a large family but some have died through drugs, suicide, whatever...some jobs remind me of family I've lost… and sometimes jobs do wake me up at night for a while afterwards. (Line 208)*

Veteran paramedics expressed how their ability to recognise the connection between current work-related trauma and past *personal life trauma* was not only helpful, but the *PTG* they had experienced throughout their career also helped them reconcile personal events:

> *Participant 6: I knew one of the paramedics who suicided very well… they were already carrying some PTSD from their past when they came into the job… they talked to me about a lot of horrible stuff that happened to them in their childhood. (Line 548)*

> *Participant 12: …one of the medics who suicided had some underlying issues to begin with, from their own past, that probably didn't help... I couldn't say which portion or percentage of past issues that affected them more, the work or their past trauma. (Line 478)*

As the above quotes suggest, some participants believed that *personal life trauma* contributed to how work-related trauma affected them and also contributed to some of the paramedic suicides over the past decade. It is interesting to note that even though past history with trauma affected some participants, they were still able to effectively manage the work-related trauma without becoming incapacitated by it, or turning to suicide as a option

themselves. As the last quote above identified, it is difficult to identify whether personal life history with trauma or work-related trauma has a greater impact, but it is clear from participants that many believe a past history with trauma in a paramedic's personal life can have detrimental implications. Future paramedic research would be required to investigate the differences, if any, of *trauma impact* between *personal life trauma* exposure and work-related trauma. The *trauma management* results from the current study suggest that participants have learned, and developed effective coping strategies to help mitigate the impact of this past trauma. Numerous variables such as *EI* and *PTG* have previously been discussed in this dissertation. Eight regularly utilised *trauma management* strategies were identified among veteran paramedics. Table 8.2 lists the eight most common *trauma management* elements across participants. These will be discussed in greater detail in the sections.

Table 8.2

Trauma Management Strategy Elements

Trauma Management Strategy	No. of Participants
Down Time	12/12
Humour	12/12
Job Reviews	9/12
Learning Outlets Early	9/12
Multiple Effective Outlets	12/12
Proactivity	6/12
Support Networks	12/12
Work-life Balance	8/12

8.3.3 Down time.

Down time between jobs, as well as time off work, was a common coping strategy that some participants found helpful. *Down time* between jobs was defined by participants as a break between jobs throughout the day, especially difficult jobs, instead of getting back-to-back calls throughout their entire shift. Participants identified that *down time* between jobs provided them with the needed time to have a drink, go to the toilet, and most importantly, to discuss and 'process' the *trauma impact* from jobs they attended that day:

> *Participant 4: …where I came from, we had more down time than here. That was probably my favourite time in the service... the workload wasn't horrendous, you were busy but not too busy. I loved sitting in the station between jobs laughing and talking to mates… I used to go to work with a spring in my step and was really happy to go to work. (Line 701)*

Participants highlighted the importance of having *down time* to emotionally, psychologically, cognitively, and verbally process work-related trauma they experienced. Having *down time* between jobs helped them to reduce the risk of the *compounding and cumulative effect*s of working with trauma by allowing them to process it as they went from one job to another, instead of trying to process everything at the end of a shift when they were often too tired:

> *Participant 1: It may not sound like it, but just having a gap and down time between jobs to have some personal time. It gives you time to come down off one job before going out on the next one… just having time to get a coffee or even go to the toilet... (Line 787) ...that can definitely change endurance... (Line 796) ...when I had more down time I went home with so much more energy, which carried through to more eagerness to help take care of kids and cook at home, it was much better. (Line 799)*

> *Participant 1: ...down time is gone, and that changes the way you go home, and the way you go home changes your energy level when you come to work the next day. We need shifts instead of being flogged... (Line 744) ...we have less and less down time and that's not healthy. The down time was processing time... it helped replenish and refresh me. Sitting down, watching a bit of daytime t.v., waiting for the next job while you bad mouth some celebrity, that's processing as well. (Line 779)*

Many participants expressed how difficult it was to address the *trauma impact* from jobs they had attended during their shift when they had no *down time* between jobs. The reasons for the lack of *down time* varied from one participant to another, but the most common contributing factors were the demands of high call volume from the organisation, organisational policies to not return to the depot, and expectations imposed by their organisation to quickly get back 'on the road' so they were available to respond to more jobs. Results suggest that participants believed that the lack of *down time* demonstrated the organisation's lack of care and consideration for the overall well-being of the paramedics. Many participants expressed the belief that *down time* is generally not seen by their paramedic organisations as an essential element of *trauma management*. Since *down time* was not regularly available, for whatever reason, veteran paramedics made conscious and deliberate decisions to stop working and create *down time* if they felt compromised by any traumatic jobs. Participants not only recognised the need to have *down time* to cope, but also consciously created *down time* as a strategy that helped. Another useful coping strategy participants identified was the use of *humour*.

8.3.4 Humour.

Several past studies have found *humour* to be a very common paramedic strategy for managing trauma (Christopher, 2015; Sorensen & Iedema, 2009). Results from the current study also found *humour* as a very important and helpful coping strategy for participants and their *trauma management*. Participants expressed how making light of a serious situation through *humour*, enabled them to better manage *trauma impact* by emotionally connecting with each other without feeling emotionally vulnerable:

> *Participant 1: Early in my career humour was encouraged at the time, then they started attacking the dark humour saying, "dark humour is bad for you," well actually, no, it's a coping mechanism. I can see it isn't the healthiest but it is a coping mechanism, it sort of helps unite you and your colleagues. (Line 706)*

The majority of *humour* that medics used as a coping strategy was referred to as 'dark *humour*.' Dark *humour*, also referred to as black *humour* or dark comedy, is *humour* which typically employs morbid content and makes fun of subject matter that is often considered a taboo topic of discussion. To the person who does not use dark *humour* as a coping strategy, such *humour* may be perceived as tactless, disrespectful, insensitive, uncaring, mocking, thoughtless or careless behaviour. An example of dark *humour* would be making a pun or a joke about the way a person died, such as nicknaming an unknown drowning victim 'Bob' and playing on the word that resembles a bobbing object designed to float in the water. Generally speaking, participants found the use of *humour* to be a physical, emotional, and psychological release, and a temporary distraction from the intensity, and confronting nature of a traumatic situation. The following participant example helps illustrate how participants used *humour*:

> *Participant 6: ...there are so many different, weird and wonderful jobs we attend and we've just developed a black humour that helps us cope… Even when things don't go all that well... (Line 302) ...I can use humour a lot more now that I'm older, whereas it would have come across cheeky to others when I was younger… (Line 746) Patients respond well to my humour and it helps that takes away a lot of stress for me, I don't have that bad feeling after completing a bad job… (Line 750) ...I have a very warped sense of humour now. (Line 788)*

Some participants reported that the organisations they work for prohibit them from using dark *humour* at any time as it may be perceived by others as rude, offensive, disrespectful, inconsiderate, insensitive, and uncaring if overheard by others. For participants, *humour* was a significantly beneficial outlet, when used with discretion, but they had to learn to find the right balance between using their *humour* for stress release and maintaining respect for their patients. The following participant quotes illustrate the implications of using dark *humour:*

> *Participant 7: Paramedics have an extremely dark sense of humour, we get down into the bowels and the depth of humour and that's how we cope… but at the moment, they're cutting off that coping mechanism and not offering anything else, they're not offering us an alternative, so people don't know what to do anymore. (Line 314)*

> *Participant 2: Working as a paramedic has made me a better person, I've developed a wicked sense of humour. (Line 273)*

These results suggest that *humour*, particularly dark *humour*, was a very helpful and effective coping strategy used by veteran paramedics throughout their career. It is important to note that the majority of participants were able to discern the appropriate times, the correct ways, and the right people to use dark *humour* with. Due to participant awareness about the benefits of *humour* as an effective coping strategy, veteran paramedics also appeared very resistant to the attempts of non-paramedics, and/or organisations, to stifle the use of *humour* as a *trauma management* strategy. It is important to emphasize that participants did not typically resort to *humour* as a coping strategy during critical situations, when it was not appropriate, during sensitive situations or among the general public, who would not understand their dark *humour*. *Job reviews* were another *trauma management* strategy that participants identified which helped them cope with *trauma impact*. Some aspects of *job reviews* were discussed in previous sections of this dissertation, but not as a *trauma management* strategy. *Job reviews* will now be discussed as a *trauma management* strategy in greater detail.

8.3.5 Job reviews.

Job reviews were previously discussed as being used in the *practical-based training* model to help trainees review clinical aspects of a job, as well as develop a degree of *self-awareness* about the impact it had on them. *Job reviews* were defined by participants as a retrospective introspection or discussion with colleagues, about their medical treatment of patients and all associated variables. The way paramedics conducted *job reviews* was found

to vary between participants, but many common elements of the *job review* process were found to exist. During the review process, participants often systematically reviewed clinical aspects of the job in chronological order from the beginning of the job to the end of the job, or day, as they asked themselves the following questions: Did I do anything wrong that would get me in trouble? Did I do the right thing by the patient? Would other medics have made the same choices? Is there anything I could have done differently? What could I do better in the future? Veteran participants reported using the *job review* process to help provide themselves with peace of mind that they had done the best they could for their patients, and to help them identify improvements that they could make in the future. In the context of a *trauma management* strategy for veterans, participants regularly reviewed the medical treatment they provided to patients from the time they arrived on the scene to the time they turned the patients over to the care of emergency hospital staff.

Job reviews were found to provide participants with peace of mind that they had not made any life threatening clinical mistakes with patient treatment, and they helped to reassure themselves that they were not to blame, if they provided the correct medical treatment and a patient's outcome was still negative. Participants identified *job reviews* as a helpful coping strategy and used them to reassure themselves that they are competent medics and had fulfilled their duty of care for patients. Over time, and with years of practice, veteran paramedics learned to conduct quick and efficient *job reviews*, identify improvements they could make on future jobs, and relinquish any undue responsibility or guilt for any unfavourable patient outcomes. Once participants completed a *job review*, they reported feeling a level of acceptance, peace of mind, and an increased capacity to effectively manage the trauma to which they were exposed. The following participant examples help illustrate these emotional and cognitive processes:

> *Participant 2: ...reviewing jobs to learn from them is better than people wondering, what more could I have done? I should have done this, or maybe that… I didn't, it's not, they weren't, we didn't. We did what we thought was right at the time… I'll quite often go back after a few weeks and look at my case sheets and think, "ok, I learned that and this, ok." (Line 600)*

> *Participant 8: After a while I learned to just start to talk straight after a job, just so it plants that seed to start coping with it. "Ok, so let's just talk about how we did it and run through everything and just actually take that five minutes to have a break," so you don't suddenly hit that second emotional call straight off the bat. If it is a bad job, I'll take ten minutes to review, I'm going to clean my ambulance out, pack my stuff together and get that emotional state under control and just go ok, we're ready to reset now. (Line 522)*

As stated above, participants were very cognisant that *job reviews* helped them to effectively cope on both a clinical and emotional level. Participants reported that this *self-awareness* of needs, and how to meet these needs, was developed over many years of practice. Positive and effective *job reviews* included phrases that helped them relinquish taking responsibility for a negative patient outcome. The following participant excerpts are examples of these positive reviews:

> *Participant 8: ...I can now make bad jobs positive 99% of the time, where I can say, you know what, life is good because we did this or that during that job… even if I only gave a guy a chance to be on life support for four days… to give his family a chance to gather together and say goodbye and that's the positive that I can take out of it...Earlier in my career I would have told myself, "you stupid idiot, you didn't do good enough for that patient to get back to his family..." (Line 581) ...we need to remind ourselves that we did everything we could. (Line 589)*

The above participant comments suggest that veteran paramedics learned to change their negative *job reviews* into positive ones, by reassuring themselves that they did the best they could and accepted that their efforts were enough, regardless of the outcome. As participants mentioned above, they learned that negative *job reviews* undermined effective *trauma management* and they carried regret, blame and responsibility for negative patient outcomes. Some participants identified times early in their career when they would use *job*

reviews in negative ways to dwell on, question, and doubt, all the things that they could have done differently, that may have better helped a patient. Over the years, participants learned the detrimental consequences of negative *job reviews* and learned how to change them. Many participants expressed concerns and suggested that *job reviews* are not taught to students in the current training programs like they were when they were students in *practical based* programs, so there are no opportunities to teach students about the importance of positive *job reviews*. Many participants expressed the benefits of the *job reviews* they received as students and how it laid the foundation of review habits that were modelled by trainers, and how they helped them reconcile *trauma impact*:

> *Participant 10: …I just run through jobs and make sure that I've done everything I could do, you know, clinically, and then I can let it go emotionally... (Line 48) ...when I was in training, we would do a review of the job and how things affected us… I would do reviews with my students like I was taught... reviewing jobs has formed part of my coping strategy with big jobs… I think you have to be able to do that. Maybe the students nowadays aren't being taught this. (Line 380)*

> *Participant 11: Reviews are certainly something I've gotten in the habit of and I'll actually do it on the job as well. I'll talk to my partner and say, "can you think of anything else? Have I missed anything?" We've done this, this, this and this, and they might say, "well, how about this?" or "nope we covered that"… it's not just at the end of the job, it's throughout the job and then re-assessing at the end. (Line 160)*

> *Participant 11: I used to be a mentor for juniors and part of that mentoring process was to finish the job and then say to the student, "Ok, is there anything that we could have done differently?" So maybe it's just in my psyche' that I assess myself personally now, you know? Yeah, back when I was a mentor certainly, I don't know what their training is like now. (Line 164)*

Results suggest that participants believed that *job reviews* helped them by forcing them to take *down time* with colleagues, to help create emotional and cognitive processing time, which in turn, also helped them reconcile *trauma impact*. Many participants reported that the *job review* process was taught to them during their *practical-based training* by their trainers and mentors on the road, and they then adopted this practice throughout their career. Whilst this *job review* process was reported to be helpful for veteran paramedics, participants also reported that this same review process was detrimental to their well-being when it was used to focus on the mistakes they made, eliciting negativity. Many participants expressed how habits of negative *job reviews* earlier in their careers were toxic to their well-being, but over time, participants were able to refine the *job review* process into a reassuring strategy.

8.3.6 Learning outlets early.

Another *trauma management* variable identified by participants was the benefit of learning effective *trauma management* outlets early in their career, because it helped to minimise the *cumulative and compounding effects* of *trauma impact*. The large majority of participants learned effective *trauma management* strategies early in their career, or before they commenced their career:

> *Participant 9: I think going into the job with your stress outlets already in place helps tons... I know that if something goes wrong and I'm not coping, I've already got something in place to deal with it. (Line 248)*

Participant 8: The way I handle things has definitely changed from when I started... if I had had some sort of coping strategies in place to help me from the beginning it would have been a lot easier... (Line 611) ...it's been a long and arduous task figuring out how to cope. (Line 615)

Participant 12: I still handle things the same way as when I started. I still try to take a step back and don't take too much on board and try to remember my family. If I relate to a job, I've learned to remain objective. I turn to my support network of friends and family and colleagues that are there for me. (Line 190) I still walk along the beach, still do all the same things to cope that I've always done for the past 20 years... (Line 198)

Participants stated that they continued to learn more *trauma management* strategies throughout their career but by learning healthy and effective outlets early, they could discern whether or not additional outlets were helpful or needed. Other participants, who had not learned healthy *trauma management* outlets early in their career, expressed the subsequent difficulty and the challenge of learning them through a trial and error process:

Participant 7: I just stayed busy all the time early in my career, so I wouldn't have to think about all the horrendous stuff I saw… (Line 343) ...I would tell a class of new paramedics to stay away from drugs to help you cope, stay away from alcohol, stay away from bad stuff to help you cope... (Line 1146) ...cause you'll start to develop a tolerance for it ...and all those bad jobs ***will*** *catch up with you! Use healthy ways to cope, go to church, and just chill out and relax. (Line 1151)*

All participants expressed their awareness of unhealthy or dysfunctional coping strategies earlier in their career and the associated difficulties of breaking unhealthy coping habits once they were established. For example, veterans who had used unhealthy coping strategies, such as alcohol, to help them manage *trauma impact*, were more likely to abuse it over time and create a dependency on it. Participants expressed the ease of using alcohol as

a coping strategy compared to the more effortful and healthy outlets, such as engaging psychological services for support. These results suggest that the earlier paramedics learn effective coping strategies, the greater chance they have of managing the *trauma impact* they will experience throughout their career, which will contribute to a longevity of career. Results not only suggest that early learning of *trauma management* strategies is important, but that the number of coping strategies a paramedic has learned also helps them cope more effectively.

8.3.7 Multiple effective outlets.

Results suggest that *multiple effective outlets* were also reported as an important contributing factor in participants' effective *trauma management* and career longevity. *Multiple effective outlets* were defined by participants as the numerous functional and effective options which veteran paramedics had available to help them cope with work-related trauma. Examples of *multiple effective outlets* identified by participants were; talking to others about how a job affected them, journaling their feelings and thoughts, listening to music, exercising, spending time with family and friends, taking time off work, resting, and participating in enjoyable extracurricular activities. Results suggest that the more *effective outlets* participants had at their disposal, the more manageable was *trauma impact*. Results also indicate that the quality and quantity of *multiple effective outlets* for participants was influential in their effective trauma management. The quality and quantity of *multiple effective outlets* varied from one participant to another but the key common factor across all participants was that a multiplicity of outlets was important. The differences and similarities of effective outlets are demonstrated in the following participant statements:

> *Participant 9: I just wrote it all down and it was seriously detailed… then I talked to my partner at home... I also spoke with the chaplain at the time… I spoke with my crew partner… (Line 150) ...I hugged my family a lot… (Line 159) ...I like to do gardening, which helps... (Line 185)*

Participant 7: ...when I'm affected by a difficult job, I rely on my religious faith to help me and give me purpose… (Line 461) ...talking to my wife and family help... (Line 468) ...I turn to my friends… (Line 471) ...the Chaplain before I came here helped a lot... (Line 498) I play a musical instrument... (Line 1106) …I enjoy building things with my hands. (Line 1108) Taking time away from work, you need that time away… (Line 1112) ...students need to be taught outlets, teach them the strategies of how to cope with what they ***will*** *see. (Line 1234)*

Participant 8: My saving grace was the guy I worked with back home… he taught me to let things go...to talk about it and work through stuff… (Line 122) We need to be able to care for each other so we can care for patients, otherwise we'll end up in the same position, we'll end up dead… (Line 137)

Participant 8: ...music is my biggest thing I use to relax....and get me out of a bad mood and swimming is another thing I use… (Line 478) ...I learned a while back to take five seconds to take a breath and just go, ok, "where am I at?... this is affecting me, what do I need to do to start the process again? Do I need to talk to somebody? Do I need to sit down and have a cup of coffee and just take five minutes to myself?"...Being able to take that step back just for a bit of time helps me. (Line 496)

As many of the above participant quotes suggest, some participants used the same outlets repeatedly. Veterans expressed the benefits of how *multiple effective outlets* fostered an increased sense of control in their life. This increased sense of control is consistent with the Well-Being Model (Williams & Arnold, 2008), which outlines the three fundamental elements of 'sense of belonging,' 'sense of control,' and 'sense of competency,' that each individual requires to feel a sense of Well-Being. Williams and Arnold (2008) suggest that the more these three elements are compromised, the more an individual loses their sense of well-being, and the more their ability to function is compromised.

If a paramedic is traumatised and dependent upon talking to their best friend as their only trauma outlet, they are likely to feel vulnerable and disempowered if that person is not available when they want to talk. With only one outlet option, a paramedic is not likely to feel in 'control' of their emotions, they are not likely to feel 'competent' to effectively manage *trauma impact*, and they are less likely to feel that they 'belong' because they are not coping as well as their colleagues. Only having one outlet is likely to undermine the paramedic's 'sense of control,' 'belonging' and 'competency,' because they are dependent on their absent friend to cope with the trauma. Conversely, multiple outlets facilitate an increased 'sense of control' through having choice, which leads to a greater 'sense of competency' to manage trauma, which in turn increases the 'sense of belonging' because they are coping like their colleagues. The following statement by participant 3 demonstrates their *impact self-awareness* to know what is needed when they are affected so they feel in 'control' to know how to deal with it:

> *Participant 3: ...getting validation and understanding from someone… (Line 275) …off load, debrief at the end of each shift, not just at the end of each job… Take time out if you need to for half an hour." (Line 284) I'll ask my crew partners if there anything that needs to be revisited. It gives everyone a chance to vent, good, bad, indifferences... so if that emotion rides up again, we can deal with it. (Line 289)*

Results from participants in the current study suggest that when they had multiple outlet options of effective *trauma management* available, they had increased confidence in their own ability to effectively manage and resolve work-related trauma. Participants suggested that their confidence increased over time, which fostered an increased 'sense of control' and 'competency.' As 'control' and 'competency' increased and their ability to effectively manage work-related trauma increased, participants reported an increased 'sense of belonging' with their colleagues, family and friends. Participants learned which outlets were most helpful for them to use and also reported the benefits of learning to adapt these outlets to be responsive to the type of trauma they experienced. Results also found that the more proactive participants were in managing *trauma impact*, the less they were affected on both a short and long-term basis.

8.3.8 Proactive trauma management.

Proactive trauma management was another beneficial outlet participants identified as a contributing factor to their effective *trauma management* and career longevity. *Proactive trauma management* was defined by paramedics as the active thought process, and associated purposeful behaviours, used to resolve impact through *multiple effective outlets*. Results of this *trauma management* strategy suggest that participants had learned the short and long term benefits of proactively addressing *trauma impact* as soon as they were affected by a job, rather than suppressing the impact or being passive in seeking resolution. Participants expressed that they were aware of how detrimental their past casual and passive attitudes had been in addressing *trauma impact*.

Participants suggested that their passive approach to *trauma management* early in their career, was a contributing factor to the *cumulative and compounding effects* of work-related trauma. For example, some participants expressed that early in their careers they would not have sought professional help and that they believe that the general paramedic population would not seek help from a professional, such as a psychologist or chaplain. Over time and with experience, they realised the importance and value of seeking therapeutic support and the associated benefits. Veteran participants expressed how they became increasingly aware of the negative impact that work-related trauma was having on them and learned to recognise the correlation between proactive trauma resolution and the amelioration of negative impact from the trauma they experienced:

> *Participant 9: We had one chaplain for everybody in the state and he was brilliant… (Line 196) ...he was brilliant because he knew my child, he knew the issues in my life, he remembered every time he rang and he used to ring every potentially traumatic job... (Line 198) ...just that whole, personal, interactive contact. He was good and he was a single person doing it for the whole state. (Line 201)*

> *Participant 12: If you have colleagues that you can trust and talk to, make sure that you send them a text or something so they know you need to talk, don't just hope that they might contact you soon. (Line 335)*

> *Participant 10: I would say to talk to someone about it. Don't be shy, there's psychologists out there to talk to... (Line 328) ...I've worked out how to do it for me but what I do might not work for someone else... (Line 340) ...something that I've learned to do after a few of those big jobs is to not avoid it and pretend that it's alright, but to actually remind myself that I need to go and talk to someone about it… (Line 344)*

Over time and with practice, participants were able to attend difficult jobs and proactively address trauma as it occurred, which helped them avoid accumulating and compounding *trauma impact* and also helped them minimise the risk of re-traumatisation. Establishing proactive habits of resolving *trauma impact* as it occurred was identified by participants as a beneficial strategy. Not only was participant *proactivity of trauma management* beneficial, but veteran paramedics also identified the benefits when their organisation, support personnel, or colleagues were proactive in supporting them. The following participant quotes are examples of how *proactive trauma management* helped them cope more effectively when they were affected by trauma from work:

> *Participant 6: Organisations need to be proactive, they need to be consistent...they need to have a consistent person who knows the shifts people are on and knows them personally. Then they can tell if something is going on with them or if there is an imminent birth in their family of their first child or something like that. (Line 929) Management needs to take the time to know their people so they can pick up if something is happening and can say, "hey is there something happening?... Is there something troubling you?...You seem to be weighed down with something recently, can we help you with something? (Line 936)*

> *Participant 12: Colleagues on other jobs will hear that you went on a difficult job and they'll come up and say, "oh, I heard you had a terrible job"... so you talk about it and you might talk with them a few times throughout the day or with other friends who have heard things. (Line 96) Many times colleagues have come up to me and said, "are you ok?" (Line 100) Text your close colleagues, facetime them so they know, "hey, I went to this, can we catch up?" And they can do the same for you and you're there for each other... (Line 206) ...there was only one Chaplain in our organisation but he seemed to be everywhere...he was fantastic... you could sit and have a chat with him about anything, and you knew it was confidential. (Line 354)*

As the above participant statements demonstrate, *proactive trauma management* was a contributing factor to effective *trauma management* for veteran paramedics, especially when external *support networks* were proactively providing support.

8.3.9 Support networks.

Results suggest that *support networks* greatly contributed to the effective *trauma management* of veteran paramedics. *Support networks* were defined by participants as friends, family, counsellors, colleagues, organisational support, pets, or any kind of support which helped alleviate physical, cognitive and emotional distress following *trauma impact*. As with the benefits of *multiple effective outlets*, results suggested that the more *support networks* a participant had access to in times of need, the more manageable the *trauma impact* was for them. Results suggest that numerous *support networks* helped foster a participant's sense of 'well-being' and increased the associated elements of 'belonging,' 'control' and 'competency,' as previously discussed (Williams & Arnold, 2008). Participants reported that having *support networks* encouraged debriefing, which often provided an emotional and psychological release, even if the trauma they were affected by wasn't discussed. This connection with individuals in their *support network* helped participants feel supported and cared for. The following quotes by participants are examples of how *support networks* helped them:

Participant 2: I was lucky because I could always talk to my sister, and she'd help me... (Line 267) … I talk to my counsellor, I talk to my partner at home... (Line 537) ...I've always had good friends to talk to... (Line 1340)

Participant 7: When things get difficult, I'll talk to my wife and my family... (Line 450) ...my local parish, church friends and the priest at church… (Line 465) ...then there's my friends, definitely… (Line 473) …sometimes I've used psychologists, and Chaplaincy services if I've needed them… (Line 496)

Participant 11: I talk to my close mate when I've had a bad job… (Line 439) ...my husband is my best buddy and I know I can talk to him anytime… (Line 443) ...I've got a lot of friends outside, but my little core group of colleagues are all really funny, so my social cohort within the organisation supports me a lot… (Line 447)

As the above examples demonstrate, participants reported that engagement with their *support networks* helped them to share the unspoken emotional burden that they carried, helping the *trauma impact* feel more manageable. In many instances, paramedics reported that they didn't even want to, or need to, talk about the trauma. The benefit and relief that they expressed was simply from knowing they had the option to talk if they wanted to and that just knowing this helped them to manage the *trauma impact*. In the majority of cases, *support networks* were more about quality than quantity, but in many cases participants had both. *Colleague support* was also a very helpful trauma management outlet used by veteran paramedics.

8.3.10 The support of colleagues.

The *support of colleagues* was identified as a unique and invaluable support network. Colleague support was often found to be more beneficial than family support, for some participants, due to common work experiences and a need to protect family from the *trauma impact*. This was because colleagues were more likely to understand the experience of *trauma impact* and could relate on a level that family members could not. Participants were also cautious about negatively affecting family members by discussing work-related trauma and 'burdening' them with their emotions or unintentionally eliciting negative emotional responses in their family members. The participants who experienced the benefits of colleague support, expressed that work partners would either "make or break" a paramedic's ability to cope with the job:

> *Participant 4: The crewmate I'm with at the moment is great, fantastic, so I'll off load to them... (Line 259)*

> *Participant 8: ...you've got to have the right work partner to work with before you even step into that vehicle, that's important, so when things start affecting you, you can make it through the difficult times… You can say to each other, "It's you and me, we're going to get through this together." (Line 455) We help each other get through things... we support each other clinically, emotionally, and are there for each other… we are at the coalface, we are the ones who understand each other the most… (Line 677) ...we have to talk to our crew partner about what's going on with us or we'll completely lose it! (Line 717)*

Participants suggested that when the *support of colleagues* is strong and close comradery exists between paramedics within an organisation, a stronger *sense of community* is created. This was found to greatly contribute to the participants' ability to manage *trauma impact* more effectively. As the above participant examples illustrate, many participants identified the *support of colleagues* as their most beneficial *trauma management outlet* and suggested that good *colleague support* facilitates *effective management outlets* such as debriefing, *job reviews,* and increases elements of well-being (Williams & Arnold, 2008).

The process of talking to, or debriefing with colleagues, was not only generally helpful but was described as a very validating experience for most participants because their crew mate was there with them during a difficult experience, or has been through a similar experience. Colleagues were identified as people who would be the most likely to understand the experience of *trauma impact*. Participants also identified that they were all aware of how abnormal their work is compared to other professions, but commented on how sharing similar experiences helps normalise their experience which in turn, fosters the Well-Being element of 'sense of belonging' (Williams & Arnold, 2008). These results are consistent with other studies (Schmidt & Haglund, 2017) which suggest that the *support of colleagues* helped participants share an understanding and sense of community, which seemed to help them share the emotional and psychological burden of work-related trauma. By knowing that all paramedics have experienced similar jobs at one time or another and that all paramedics are at different stages of managing work-related trauma, participants expressed a type of shared collective emotional and psychological burden:

> *Participant 11: ...if you've got a good work partner in this job, they're worth their weight in gold, they really are! I'm very fortunate that I have a very, very good offsider. We're friends as well as work colleagues and having colleagues that you can talk to and get stuff off your chest makes it manageable… (Line 64) ...some colleagues, there's no way you're going to share anything with them because they're a blabbermouth. (Line 68)*

Participants expressed that when good comradery exists within an organisation, the common understanding that 'everyone is in the same boat,' appeared to be the foundation of proactive *colleague support*. When a colleague heard they had attended a difficult job, they invited them over to their home for dinner to help support them:

> *Participant 10: ...the next day after my bad job, we had a really great, supportive group of people on shift… I remember telling a work mate, "I did that job last night," and he said, "come over for dinner tonight..." (Line 96) ...just having me around for dinner helped a lot. (Line 104)*

Participants regularly experienced unsolicited "follow up" from colleagues inquiring how they were doing several days, or several weeks, after a difficult job. Proactive rather than passive support helped improve good *colleague support*. When comradery does not exist, or *support networks* are absent, results suggested that some paramedics preferred to push their support systems away resulting in more difficulty coping with *trauma impact*:

> *Participant 7: ...where I came from, you're very, very close to the people that you work with...You're like family… (Line 281) ...the ambulance service here is weird because it doesn't have that comradery... (Line 285) ...the politics have ruined it and you're not allowed to have that playful banter any more… that helped release stress after hard jobs. (Line 289)*

> *Participant 8: If colleagues work together and everybody takes ownership and responsibility so you're never alone again then you've won… then you'll never get that point where you're standing amongst a thousand guys in the same uniform, but feel like there's nobody there… (Line 828)*

Support networks, particularly the *support of colleagues*, was identified as a crucial contributing factor to effective *trauma management* for veteran paramedics and the longevity of their career. Results suggest that *work-life balance* was also a contributing factor.

8.3.11 Work-life balance.

Participants identified times earlier in their careers when they did not have a good *work-life balance* and the detrimental role it played in their ability to effectively manage work-related trauma:

> *Participant 7: ...you shouldn't work too much overtime and get stuck in the 'overtime rut' of needing the extra money…it squeezes the passion out of you... (Line 1104) ...you need time away from the job. (1106)*

> *Participant 11: ...you need to have something important to you outside of work and have hobbies and things to focus on outside of the job (line 100)...just switching off at the end of the day after a night shift and trying not to think of work, which I'm good at. Once I'm home, I'm home and my family is the most important… (Line 112)*

> *Participant 11: ...you have to have balance in your life in this job, it's just a job. Talk it through, use the professional avenues that are available... (Line 263) ...get the stress out, don't bottle anything up, whether it's a personal relationship or a work thing, it doesn't do any good... (Line 267)*

Participants reported a loss of satisfaction and fulfilment in their personal life by working too many hours and as a consequence, also experienced the detrimental effects of high *frequency* exposure to work-related trauma, many of which were symptoms of PTSD, such as; social withdrawal, sleep disruptions, nightmares, hypersensitivity, heightened startle response, and interruptions in familial and romantic relationships. Participants expressed how they were forced to adjust their *work-life balance* to save relationships, their career, and in some cases, their lives. A large majority of participants had well-established hobbies and extra-curricular activities, which provided healthy outlets to help redirect the risk of obsessive thoughts and rumination about work-related trauma. As part of the *work-life balance*, participants learned to set boundaries of self-care to help ensure the separation between work life and their personal life. Participants learned to set firm boundaries by challenging self-imposed and/or organisational expectations, which undermined their ability to effectively cope with trauma. To emphasise the distinction between work time and personal time, some paramedics created conscious physical or mental indicators to 'turn off' from the day's work and any effects that they had experienced from jobs:

> *Participant 3: I know earlier in my career I was carrying so much work stress home with me that I would misdirect all my work frustration at my family if someone made a mistake. One day my wife sat me down and said, "listen, you're coming home really angry and stressed out...you have to be able to leave work stress at work. (Line 441) My wife said, "when you get home from work, metaphorically, dump clothes, emotions, everything in the garage to help you realise you're no longer at work... Make a decision to leave what happens at work, at work"… changing that helped me grow as a person … I don't let influence 'A' come across to influence box 'B.' (Line 447)*

Setting boundaries of self-care against organisational expectations to be back on the road before participants were emotionally and psychologically ready, was something that all participants reported the need to learn throughout their career. The majority of participants expressed the emotional and psychological dangers of overcommitting to paramedic work or trying to meet unrealistic expectations that were imposed by their employer. These results suggest that participants were more effective in managing work-related trauma when they had a good *work-life balance*, than earlier in their career when these habits were still being refined. Participants not only considered a good *work-life balance* to be an important variable in their effective management of work-related trauma, but it was also identified as an important contributing factor to the longevity of their career.

The Trauma theme, with its respective sub-themes of *trauma impact* and *trauma management* was identified by participants as a dominant influential variable in effective *trauma management* by veteran paramedics and the longevity of their career. *Trauma impact* results suggest that even though all participants are affected by work-related trauma on an ongoing basis, veteran paramedics have developed skills and competencies to effectively mitigate the incapacitating tendencies of *trauma impact*. Results of *trauma management* suggest that veteran paramedics have learned effective *trauma management* strategies and regularly apply them. Results suggest that veteran paramedics have demonstrated high levels of *EI* and cognitive processing. These results suggest that effectively managing *trauma impact* was not naturally bestowed upon veteran paramedics

but was gradually learned, practiced and refined over time concomitantly with the development of the participant's *EI*.

8.4 Summary

In summary, the two Trauma sub-themes of *trauma impact* and *trauma management,* with their respective elements, greatly contributed to how veteran paramedics effectively managed work-related trauma. The *trauma impact* elements of; *all paramedics are affected* by trauma*, PTSD symptoms, avoidance and suppression* of trauma, the *cumulative and compounding effects* of trauma, the *frequency, intensity and duration* of trauma, the *job type* that paramedics experience, *personally relating to jobs, vicarious trauma,* and *paramedic suicides* all accounted for impact that trauma had on participants. The *trauma management* elements of; the influence of *EI and PTG*, *personal life trauma history, down time, humour, job reviews, learning outlets early, proactive trauma management, support networks, the support of colleagues,* and *work-life balance* were all identified as variables which contributed to the effective management of work-related trauma and the career longevity of veteran paramedics.

The Personal theme, Work theme, Organisational theme, Training theme and Trauma theme were the five dominant themes participants identified influencing how they managed work-related trauma and the factors that either contributed to, or undermined the longevity of their career. Each of these themes, with their respective sub-themes, helped fulfill the aims of the current study and helped answer the research questions posed. These results were the most influential factors identified by participants and appeared to contribute the most to their career longevity and effective trauma management. The next section will discuss the relevance of these results to the resilience theories and conceptual models introduced in chapter 2.

Chapter 9: Relating Research Outcomes to Theories and Models

9.1 Introduction

It was anticipated that the current study would provide unique information about the specific coping strategies and support mechanisms that veteran paramedics have used to manage work-related trauma throughout their career. Many consistencies were identified between the results from the current study and the existing literature. The Personal, Work, Training, Organisational, and Trauma themes all contained variables which were crucial to effective *trauma management*, and contributed to the career longevity of participants.

Among the most influential were the Personal sub-themes of *EI* and *personality*, the Training sub-themes of *early learning trauma management* and *training type,* the Organisational sub-themes of *support* and *trust,* and the Trauma sub-themes of *trauma impact* and *trauma management*. The above key sub-theme variables facilitated the development of numerous other elements and were conceivably contributing factors to effective *trauma management* in veteran paramedics. For example, the gradual increase in *EI self-awareness* facilitated the *PTG* that occured because *PTG* was suggested to be contingent upon some degree of *EI self-awareness*, which in turn contributed to effective *trauma management*. The results of the current paramedic study are consistent with some of the existing literature on *trauma impact* and factors contributing to *trauma management* and resilience.

Results from the current study were also found to be applicable and relevant to the conceptual models of resilience as outlined in the literature review. The results relate to each of these models and will be outlined in detail in this chapter. The results of the current study are largely consistent with many of the previously published individual and organisational conceptual models. Being aware of the relationship between these conceptual models and their relationship with the results of the current study is anticipated to contribute to an increased understanding of the veteran paramedics experience of managing work-related trauma. Discussing the relationship between all organisational and individual theoretical constructs of resilience (Richardson, 2002; Richardson, Neiger, Jensen & Kumpfer, 1990) previously discussed in chapter 2 (2.2.1 and 2.2.2 respectively) also helped provide an empirical foundation upon which the current study was built.

The following organisational and individual resilience models have been chosen because studies suggest that variables in these models can influence how paramedics manage work-related stress (Bonanno, 2004; Gibson & Tarrant, 2010). For example, Gibson and Tarrant (2010) suggest that the individual resilience of employees within an organisation can influence the resilience of the organisation as a whole, just as much as an organisation's resilience can influence the resilience of its individual employees. Conceptual models will now be discussed in relation to the results identified in the current study.

9.2 Individual Models of Resilience

9.2.1 Veteran paramedics and The Metatheory of Resilience and Resiliency.

As previously discussed, *The Metatheory of Resilience and Resiliency* (Richardson, 2002) outlined 'waves' of resilience which were very consistent with the gradual development of *EI and PTG*, that veteran paramedics reported. Richardson's first study identified individual personality characteristics which helped participants effectively manage personal difficulties. The current study also identified that there were many individual personality characteristics which contributed to effective *trauma management*. Richardson's second study identified the outcome of personal growth from participants who effectively managed stress, in the way that paramedics in the current study experienced post traumatic growth from continuously overcoming trauma. Richardson's third study outlined how recognising the level of a person's own resilience and consciously increasing it, was also consistent with the *EI self-awareness* elements of veteran paramedics. Veterans' *self-awareness* of *trauma impact* and personal needs and outlets helped them to mitigate the impact of work-related trauma. The consistency of results between the current veteran paramedic study and the present study further supports Richardson's conceptualisation that resilience is a force within each individual and is internally motivated, rather than contingent upon external factors. Richardson's *Metatheory of Resilience and Resiliency* (Richardson, 2002) is also consistent with the *PTG* concepts identified in the current study with veteran paramedics. Both Richardson (2002) and the *PTG* theory of Tedeschi and Calhoun (2004), suggest that the outcome of growth occurs after trauma interferes with our homeostatic state and creates an opportunity to learn and grow.

Richardson's 2002 theory proposes four possible outcomes of reintegration (resilient, back to homeostasis, with loss, with dysfunction). Applying Richardson's theory to paramedics management of trauma, results from the current study suggest that veteran paramedics experienced either 'resilient reintegration,' where they were more resilient after the trauma than before it, or 'reintegration back to the original homeostatic state,' where they returned to the same functional state as before the trauma. Results also suggest that veteran paramedics did not reintegrate 'with loss' or 'with dysfunction.' This does not suggest that veteran paramedics did not feel loss or dysfunction at times, but results from the current study demonstrate that this was not a permanent state which prevented them from working as a paramedic.

These results raise the question of how paramedics, within the first five years following graduation, 'reintegrate' (Richardson, 2002) throughout their career, and whether or not they do so 'with loss' (where a partial recovery takes place, with a continuation of emotional or psychological loss), or with 'dysfunction' (where maladaptive strategies are used to cope with residual trauma, undermining the individual's ability to return to pre-trauma functioning; Richardson, 2002). Further research in this area would be required to explore how junior paramedics reintegrate, through the first five years of their career. For many veteran paramedics in the current study, *PTG*, also resembling 'resilient reintegration,' appeared to be the most common outcome of working through and reconciling work-related trauma. Results from the current study also supported the reintegration to a state of 'bio-psycho-spiritual homeostasis' suggesting that veterans had learned the process of how to heal and move past the impact of traumatic events, in ways that neither helped nor hindered their personal well-being. If the results from the current study were to be integrated into Richardson's model (2002), *EI and PTG* would be seen as additional protective factors for resilience, as demonstrated in Figure 9.1. This Figure has been modified to demonstrate how the protective factors of *post traumatic growth* and *emotional intelligence* contribute to 'resilient reintegration' and 'reintegration back to homeostasis.' Results of the current study propose that adding these elements will help improve protective factors to help reduce the risk of 'reintegration with loss' and 'reintegration with dysfunction.'

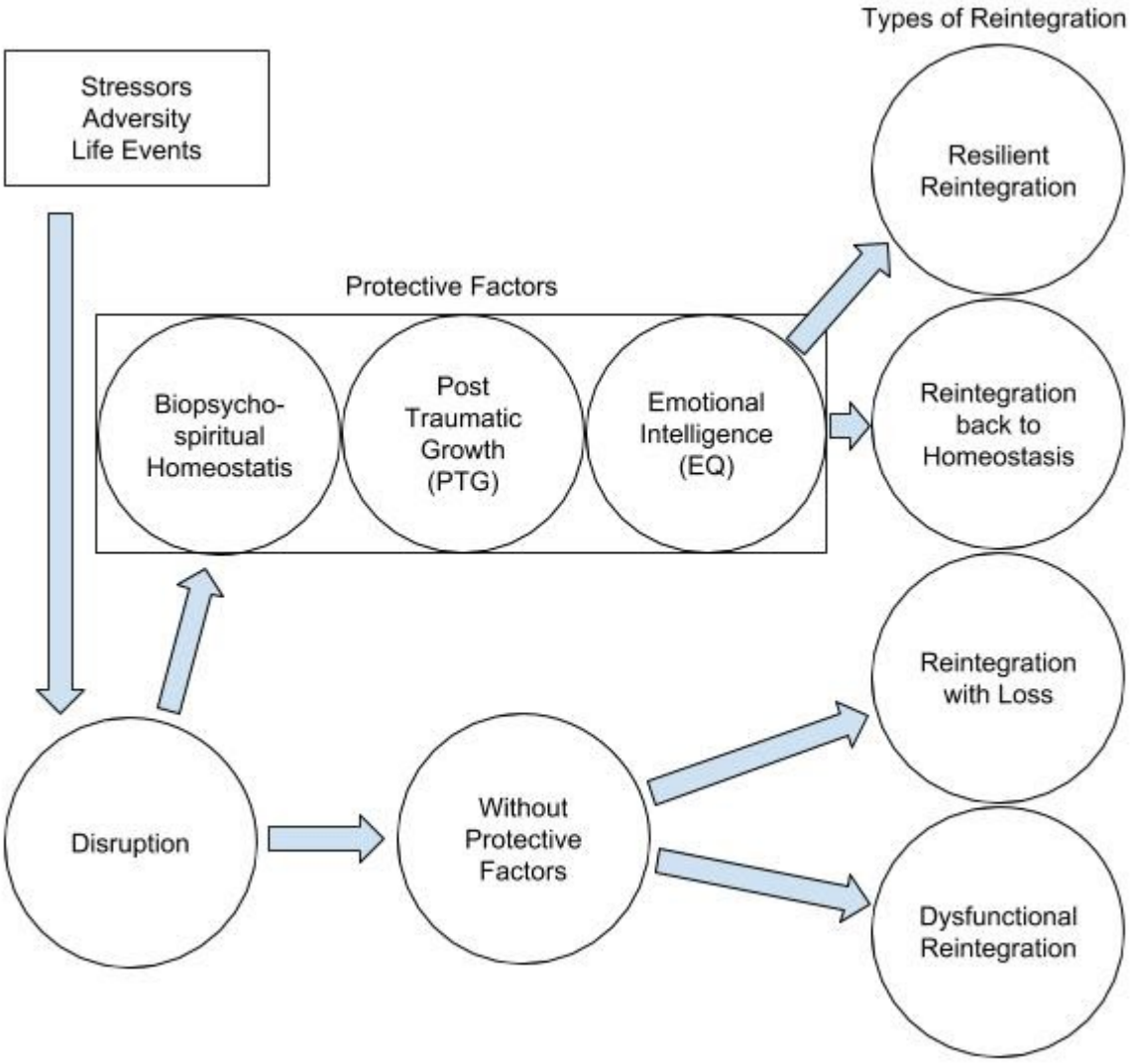

Figure 9.1. Posttraumatic growth and emotional intelligence from results of the current paramedic study were added to Richardson's *Metatheory of Resilience and Resiliency* (2002), as theoretical factors to help improve an individual's likelihood of Resilient Reintegration or Reintegration back to Homeostasis. Adapted from Richardson's Metatheory of Resilience and Resiliency by Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58,* p. 311.

9.2.2 Veteran paramedics and *Principles Model of Resilience*.

The *PTG* that veteran participants experienced in the current study was also consistent with the *Principles Model of Resilience* (Gibson & Tarrant, 2010) for organisations, which suggests that *resilience is an outcome* of a learning process, not the process itself. An important consideration to make when comparing Richardson's *Metatheory of Resilience and Resiliency* to the results from the current paramedic study, is that Richardson based his theory on a single traumatic event pertaining to a particular role, relationship or experience, whereas paramedics are frequently exposed to multiple traumatic events. Richardson recommended that additional research be conducted with high-risk trauma groups who are exposed to multiple events, because each exposure could elicit a different choice of reintegration. The current paramedic study helped fulfill part of Richardson's recommendation.

Several questions arise from Richardson's theory (2002) in relation to the current veteran paramedic study from paramedics experiencing multiple events. For example, paramedics could consciously make different trauma influenced decisions that could result in different outcomes after each traumatic event. In theory, these different decisions could lead to new decisions of reintegration. It would be interesting to investigate whether or not veteran paramedics made choices of reintegration with loss, or dysfunctional reintegration earlier in their career, but with experience, and time, learn to make better decisions about the *trauma impact* and learned to practice better resilient reintegration strategies. Conversely, if reintegration decisions are not made with each respective traumatic event, the results from the current paramedic study might suggest that a singular decision earlier in their life, or career, could account for a veteran's resilience and career longevity. For example, veterans may have committed themselves to the profession, regardless of the impact that work-related trauma had on them, and made a decision throughout their career to persevere through any *trauma impact* challenge that they may face. A singular decision such as this would be consistent with the dominant *persister* personality type, identified among veteran participants in the current study. *Persister* personality types are renowned for their perseverance to complete tasks, achieve goals, endure challenges and commit themselves to pursuits that fulfil their high values and beliefs (Kahler, 1982).

Assuming that there is merit in these possibilities, one could theorise that paramedics who fall within the five-year average work life (Streb, Haller & Michael, 2014) are more likely to have re-integrated with loss and/or with dysfunction, which could help explain some of the mental health symptomology, and increased incidence of paramedic suicide. If the prospect of a single decision about *trauma impact* were entertained further, a paramedic could make a pessimistic decision, future assumption, and fatalistic conclusion about working with trauma which could undermine effective *trauma management* and career longevity. Another important consideration, if applying Richardson's theory (2002) to paramedics, is that the reintegration process of veteran paramedics is relevant, especially if it contributes to their career longevity and management of work-related trauma.

9.2.3 Veteran paramedics and O'Leary and Ickovics Resiliency Model (1995).

As motivated in the review of literature, *O'Leary and Ickovics' Resiliency Model* (1995) focuses on the learning and growth process of resilience and suggests that emotional and psychological difficulties provide an opportunity for change and growth. O'Leary and Ickovics suggest that the individual response options to trauma are *survival, recovery, or thriving,* all of which are also consistent with the current veteran paramedics study. The current study supports the *recovery* and *thriving* responses from O'Leary and Ickovics' theories, but the results did not support the *survival* component of their model because no participants reported *survival*-like responses. Veteran paramedics demonstrated elements of both *recovery* (return to the same emotional, psychological, and functional pre-incident functioning) and *thriving (*surpassing the original level of psychological and emotional functioning, by personal growth, flourishing, and adding value to life) as defined by O'Leary and Ickovics (1995).

One of the key elements of *thriving* demonstrated by paramedic participants was their proactive attitude toward confronting and effectively resolving *trauma impact*, which in turn contributed to their increased resilience and overall sense of personal well-being. Veteran paramedics in the current study all appeared to *thrive* both personally and professionally in their field. This does not suggest that veteran paramedics were not affected by the *frequency, intensity, duration* and different types of trauma because results suggest that they clearly were, but that the *PTG* that participants' experienced was synonymous with *thriving.*

9.2.4 Veteran paramedics and *Constructivist Self-Development Theory* (Saakvitne, Tennen & Affleck, 1998).

The results of the current paramedic study are also consistent with many elements of the *Constructivist Self-Development Theory* (Saakvitne, Tennen & Affleck, 1998). As previously mentioned, the following five areas were all elements associated with the management of trauma: 1) *frame of reference*, 2) *self-capacities*, 3) *ego-resource availability*, 4) *threats to psychological needs, and cognitive schemas* (safety, trust, control, esteem and intimacy), and 5) *perceptual and memory system*, including biological (neurochemical). Results suggest that veteran paramedics' *frame of reference* was greatly influenced by the work-related trauma they experienced, which in turn contributed to their individual perception of self and how they gave meaning to their experiences in the world around them. There were numerous examples of this identified by veteran paramedics. For example, many participants expressed that working with trauma made them more grateful and appreciative of their friends, family and loved ones. As a byproduct of working with trauma, they realised how delicate life was and as a result, their perception of the world changed.

Another example was expressed by a participant who attended a job where a child had died, which reminded them of their own child's mortality. When the participant went home after their shift, they laid down with their sleeping child and cuddled them out of renewed love, gratitude, and appreciation that their own child was alive and well. These results support the notion that individual frames of reference are shaped by environmental factors and perceptual views of the world around us (Bashshur, Hernández & González-Romá, 2011). Paramedic results also supported the *self-capacities* component of Saakvitne, Tennen and Affleck's theory (1998), which refers to the individual's ability to recognise, tolerate, and effectively integrate into the world around them. Results from the current study suggest that this individual *ability* was demonstrated by the *EI self-awareness*. The *EI self-awareness* of veteran paramedics highlighted the *self capacities* to recognise, tolerate, and effectively integrate into the world around them. This does not suggest that the *self capacities* of veteran paramedics were not disrupted by traumatic jobs at various times, but does suggest that they were able to eventually reconcile the *trauma impact*, to a degree that they were able to re-integrate into the world around them.

The *ego-resource availability* described by Saakvitne, Tennen and Affleck (1998) focuses on the ability to meet one's own psychological needs in a mature way, through the cognitive and emotional processing of information, was well supported by results in the current study. Results from the current paramedic study suggested that the frequent use of *trauma management outlets* and *multiple outlets* were both key components to paramedics' ability to manage work-related trauma. The *EI self-awareness* of veteran participants helped them know when, and how, they were affected by trauma, and what they needed to do to help reconcile the *trauma impact*. The cognitive and emotional processing of trauma related information was very clearly and effectively demonstrated by veteran paramedics in the current study. Results from the current study support Saakvitne, Tenne, and Affleck's model, emphasising that growth is the byproduct of pain and they are not only inextricably linked, but are vital to an individual's ability to recover from trauma. As the results from the current study suggest, over time veteran paramedics may have experienced *PTG* as they repeatedly practiced managing trauma and worked through their *trauma impact*.

9.2.5 Veteran paramedics and the *Posttraumatic Growth Model* (Tedeschi & Calhoun, 2004).

Tedeschi and Calhoun's *Posttraumatic Growth Model* (*PGM*; 2004) suggests that individuals who simultaneously engage their trauma coping mechanisms, and activate appropriate cognitive processing protocols with regard to a traumatic event, are better able to manage the emotional impact of trauma. The *PGM* suggests that cognitive processing is central to the posttraumatic growth scenario because it enables the effective processing of both cognitive and emotional information surrounding a traumatic event. Results from the current study suggest that *cognition* was also an essential part of effective *trauma management*, but that *EI self-awareness* facilitated additional depths of cognitive processing, increasing the efficiency and efficacy of *trauma management* through more detailed introspection. Tedeschi and Calhoun (2004) theorise that an individual's social system may also play an important role in the growth process, particularly through the development of new beliefs, schemas and themes. Results from the current study are consistent with those of Tedeschi and Calhoun.

As the results evinced, belief systems consistent with the *persister* personality attributes (Kahler 1982) were suggested to be an influential variable that helped participants effectively manage work-related trauma. Veteran paramedics frequently referred to changes of perception and beliefs as part of the *PTG* they experienced. This is important because it supports the notion that *PTG* was a contributing factor to career longevity and effective *trauma management* for veteran paramedics. Tedeschi & Calhoun (2004) also suggested that *PTG* is closely related to the development of general wisdom about life and how a person effectively adapts to the traumatic events throughout their life. The results from the current veteran paramedic study also support the basic concept from Tedeschi and Calhoun's *PTG Model* that a personal growth process can be triggered by a traumatic event, which severely challenges or shatters their beliefs and understanding about the world around them. Results from paramedic participants in the current study supported this notion, supporting the view that *PTG* occured from effectively working through the *trauma impact*, and veterans believed that they are better people for having experienced, and reconciled, the trauma. Participants also expressed that they felt increased *compassion, empathy* and *self-awareness* as they reconciled challenges to their challenged beliefs and created a better defined sense of self.

As part of Tedeschi and Calhoun's (2004) theory, they suggest four factors which are typically present, and which facilitate, the positive transformative changes toward *PTG*. These are: (1) *PTG* occurs most distinctively in the aftermath of substantial trauma, rather than during low-level stress, as if the traumatic event were a catalyst to a *PTG* outcome following a trauma reconciliation process, (2) *PTG* appears to go beyond observed recovery, or returning to pre-*trauma impact*, and a distinct amount of growth occurs, (3) *PTG* is experienced more often as an outcome, rather than part of a process or coping mechanism, and (4) *PTG* requires the confronting of one's own basic beliefs or assumptions about life, which does not typically occur from moderate to low-level stress. The current paramedic study yielded findings similar to Tedeschi and Calhoun's four factors. For veteran paramedics' results suggest that the distinctive aftermath of work- related *trauma impact* appeared to be the catalyst for the *PTG* that they experienced. Low-level stress jobs for paramedics, such as treating a patient with a broken arm, would not present the sufficient amount of stress to confront their belief system and act as a catalyst for a *PTG* outcome. On the other hand, a paramedic who had an infant child at home is likely to be traumatised after

attending a job where an infant of the same age had died. The second aspect of attaining personal growth beyond the original state of pre-trauma exposure was demonstrated by participants expressing the personal growth they experienced. Veteran paramedics concluded that they are better people as a byproduct of having worked through the *trauma impact*. The majority of participants believe that as a result of resolution, they value their loved ones more and have a greater appreciation for life and how delicate it can be.

Many participants expressed that early in their career, they used to take their relationships for granted, but are more grateful now because of the extensive trauma that they have experienced. Many veteran participants also expressed the belief that they are more caring, compassionate, empathetic, and patient toward others as a byproduct of dealing with work-related trauma. This increased sensitivity, from working with trauma, presents an interesting dichotomy between what many veteran paramedics expressed and their early career belief that 'hardening up,' or being 'emotionally tough,' was the key to working with trauma. Results from the *compassion and empathy* Personal sub-theme suggests that *compassion and empathy* increased for veteran paramedics over time and may help provide answers to help challenge paramedic machoistic culture and the suppression of *trauma impact* to cope. It would be interesting to explore the differences between trauma suppression and emotional expression in paramedics and their resilience. On numerous occasions, participants expressed how much more compassion they felt for patients, and their families, when a genuine traumatic event arose, but that they had very little patience for anyone who did not have a genuine medical emergency, or patients who had brought injuries upon themselves, through anti-social behaviour or substance abuse.

The actual statement used by many participants, in relation to intolerance for self inflicted behaviours, was "I don't suffer fools," which meant that they have no patience for people who waste their time and do not have a genuine medical emergency that requires paramedic support. Results from the current paramedic study also support Tedeschi and Calhoun's (2004) notion that PTG is an outcome of working through the trauma impact, rather than part of a process or coping mechanism. In other words, PTG does not have a step-by step process that can be followed to progressively increase it, but occurs as an outcome after the reconciliation of trauma impact. Another point which Tedeschi and Calhoun (2004) made, and which the current study supports, is that PTG occurs after the confrontation of one's own basic beliefs or assumptions about life.

As the results from the current paramedic study suggest, the *persister* personality attributes (Kahler 1982) of strong traditional values and beliefs would be a contributing factor to the PTG process, whereas a paramedic who does not have such strong persister personality attributes may not have the same confronting conflict between such attributes and the trauma experiences that they face. Several participants provided very clear examples of how confronting some of their jobs were to their own belief system. These results suggest that *PTG* requires some kind of reorganisation of beliefs and thoughts about how the world is viewed. Results support findings from *PTG* studies, which suggest that the confrontation of an individual's belief system is a contributing factor to *PTG* (Tedeschi and Calhoun, 1996, 2004; Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018).

Ongoing research with paramedics and *PTG* is needed to help identify clear indicators of personal growth from *trauma impact*. Gathering additional information about *PTG* among paramedics could not only contribute toward the mitigation of trauma impact, but could create preventive strategies to turn post traumatic stress into *PTG*, by incorporating *PTG* precursors into training curriculums. High risk *trauma impact* professions such as disaster relief workers, emergency medical workers, military and police officers could benefit greatly if PTSD precursors could be turned into *PTG* outcomes. Tedeschi and Calhoun's *PTG* theory (1996; 2004) supports the notion that the veteran paramedics in the current study have experienced *PTG*, even though they still experience *trauma impact* symptoms. Taking the results from the current study into consideration, together with Tedeschi and Calhoun's *PTG* model (Tedeschi, Shakespeare-Finch, Taku & Calhoun, 2018), suggests that veteran paramedics may have experienced *PTG*. Further, the results suggest that *PTG* may have also contributed to both the veteran paramedic's ability to effectively manage work-related *trauma impact*, and to the longevity of their career.

9.3 Organisational Resilience Models

9.3.1 Veteran paramedics and the *Principles Model of Resilience* (Gibson & Tarrant, 2010).

Results of the current paramedic research were also supported by many of the organisational resilience models, previously discussed in the literature review. The *Principles Model of Resilience* (Gibson & Tarrant, 2010) suggested six common organisational resilience variables, all of which were also identified in the results from the

current study and which apply to individuals and organisations alike. The first of the six organisational resilience variables identified in the current study is, *resilience is an outcome*. As participant interviews took place, many of the veteran paramedics retrospectively valued the learning, growth, and increased levels of resilience that had occurred, as an outcome, following some of the more memorable traumatic jobs.

During participant interviews, many paramedics recognised their increased resilience by no longer being affected now by jobs that they were traumatised by earlier in their career. While participants were somewhat aware of the overall change they experienced throughout their career, many did not recognise the full extent of their increased resilience until they examined their progress during their research interview. These results suggest that just as *job reviews* were considered to be beneficial for participants, as a *trauma management* outlet, regular reviews of personal and professional resilience, growth monitoring, and progress, could be beneficial for paramedics throughout their career. It may be helpful for organisations to establish a 'resilience review' program to help both organisations and the individual, track personal progress towards, or away from, trauma resilience?

The second of the six organisational resilience variables that the current study supports from the *Principles Model of Resilience* (Gibson & Tarrant, 2010), is that *resilience is not a static trait*. This concept was demonstrated by veteran paramedics in the fluid nature of how they managed each traumatic event they experienced. For example, the fluid nature of veteran paramedic resilience was shown by the *EI self-awareness* that participants demonstrated when they were compromised. If resilience were a constant state or condition, then once resilience was achieved *trauma impact* and *management* would not vary from one person to another and the same traumatic job would affect all paramedics in similar ways, which, as the results demonstrated, was not the case.

The third of six organisational resilience variables from the *Principles Model of Resilience* (Gibson & Tarrant, 2010), is *resilience is not a single trait*. As results from the current study suggest, multiple sub-themes from each respective main theme contributed to the veteran paramedics' ability to effectively manage work-related trauma. Results from participants in the current study clearly demonstrate the multiple contributing variables associated with veteran paramedics' resilience through; the Personal theme (*acceptance of outcomes, compassion, EI, personality, PTG*), the Work theme *(paramedics culture, working*

compromised), the Organisational theme (*management, policies and procedures, registration and governance, support, trust),* the Training theme (*early learning trauma management, training type),* and Trauma theme *(trauma impact, trauma management).* These were all identified as contributing variables to trauma resilience.

Similarities between the fourth of the six *Principles Model of Resilience* (Gibson & Tarrant, 2010) organisational resilience variables, *resilience is multi-dimensional*, were identified in the current study. As such, results of the current study are consistent with Gibson and Tarrant's notion that no single model or theory is capable of capturing all aspects of resilience. For veteran paramedics, numerous theories and models supported the results of the current study as both, the theoretical models of resilience in chapter 2 and the current chapter demonstrate.

The fifth organisational resilience variable identified in the current study, which is consistent with the *Principles Model of Resilience* (Gibson & Tarrant, 2010), is that *resilience exists over a range of conditions*. Examples of this principle were demonstrated in the current study by the range of different conditions that existed between the types of jobs paramedics attended, the various ways they were affected, and how the same type of job can affect different paramedics, in unique ways. The *compounding and accumulating effects* of *trauma impact* on paramedics was also a good example of the large resilience spectrum exhibited by the same individuals. Variables such as the working environment, the *organisational culture*, and the *lack of support* from the organisation, were all identified as contributing factors to *trauma management*. The specific *range of conditions* was found to be unique to each individual, yet similarities of experience existed between all participants.

The sixth and final of the organisational resilience variables in Gibson and Tarrant's (2010) *Principle Model of Resilience* is that *resilience is founded upon good risk management.* This variable was also identified by participants in the current paramedic study. Participants' ability to effectively manage work-related trauma was influenced by their respective organisation's ability to provide good risk management support. The majority of participants did not currently feel supported by their organisation and reported feelings of isolation, mistrust, abandonment, neglect and apathy from their organisation about their emotional and psychological well-being. Participants who felt supported by

their organisation at some stage in their career, reported a much greater ability to manage work-related trauma, to enjoy paramedic work, and were more optimistic about their future careers as paramedics. These results suggest that participants' experiences with their respective organisations was greatly influenced by the organisation's good risk management, some of which was considered to be very poor, as articulated during interviews. The results from the current paramedic study and the characteristics from the *Herringbone Model of Resilience* (Gibson & Tarrant, 2010), also had many similarities on both an individual and organisational level.

9.3.2 Veteran paramedics and Herringbone Model of Resilience.

Results of the current paramedic study found numerous similarities with the *Herringbone Model of Resilience* (Gibson & Tarrant, 2010). The model is summarised as five resilience characteristics consisting of; *acuity* (the ability to recognise emotional priorities and simultaneously be aware of one's own feelings and thoughts during a traumatic incident), *ambiguity tolerance* (to continue making decisions and taking action, at times of high uncertainty and not waiting for cognitive and emotional clarity before making decisions), *creativity and agility* (to operate in innovative ways and work around problems at a speed that matches the stressful situation), *stress coping* (the ability of people, processes and infrastructure, to continue operating under increasing demands and uncertainty), and *learnability* (when individuals and organisations use past experiences and lessons learnt, to better manage the prevailing circumstances of trauma). Results from the current study suggest that veteran paramedics demonstrate *acuity* through aspects of *EI* and associated *self-awareness*. For example, as paramedics reported the development of their *acuity* (Gibson & Tarrant, 2010) and *EI,* they appeared to have increased their ability and capacity to; self assess the impact that a traumatic event had on them, better evaluate whether or not they were compromised, be aware of what outlets were needed, effectively manage the *trauma impact*, and to know when they were no longer compromised so they could re-engage in paramedic work. These results suggest that *EI,* or *acuity*, could be a contributing factor to the effective management of work-related trauma and career longevity for veteran paramedics. The implications of these results suggest that increasing the *EI* of paramedics could potentially increase paramedic's ability to cope with trauma and thereby

help address problems of attrition. Results from participants in the current study also suggested that veteran paramedics did not have *ambiguity tolerance*, but were intolerant of ambiguity by taking *down time* between jobs and setting boundaries of personal care by refusing to continue working after being compromised by a difficult job. Results suggest that taking *down time* and setting personal *boundaries of self-care* helped optimise paramedics' *cognitive functioning* and that all three of these variables improved over time and with experience, as *EI,* work experience, and confidence increased. The implications of these results suggest that if paramedics developed *EI*, were strategically provided with *downtime*, and taught *boundaries of self-care* early in their career, they might more effectively manage work-related trauma and conceivably be employed longer as a paramedic. The benefits of *ambiguity intolerance* could also help paramedics create more emotional clarity and make better cognitive decisions at times when crucial life saving decisions need to be at their optimum. Results in the current paramedic study also found similarities with Gibson and Tarrant's (2010) resilience characteristics of *creativity and agility* in that paramedics' creativity and resourcefulness was facilitated by their *EI* and cognitive processing during a traumatic event. Similar to the *acuity* resilience characteristic mentioned above, *EI* and the associated cognitive processing in paramedics appeared to facilitate the *creativity and agility* as they performed the necessary emergency medical treatment.

These implications are similar to the *acuity* implications discussed above, especially in relation to the paramedics' ability to emotionally and cognitively function in a way to effectively manage trauma while simultaneously delivering quality emergency medical treatment to patients. Results in the current paramedic study also found similarities with Gibson and Tarrant's (2010) resilience characteristics of *stress coping.* Results suggest that paramedics and organisations alike need to be cognisant, and proactively aware, of the impact of work-related stress and *trauma impact.* The competencies of the people that make up the organisation, and the collective functioning of individuals and their capacities, directly were found to influence paramedic's ability to manage trauma related stress. The implications of effective stress coping for both organisations and paramedics could contribute toward beneficial processes and infrastructure, enabling them to continue effectively operating under increasing demands and uncertainty.

Results from the current study also suggest that the implications for organisations and their paramedics of working together and having good *stress coping* skills in place, are that they both thrive and flourish. Unfortunately, the results of the current study suggest that participants and their respective organisations were not united in their *stress coping* efforts. Participants suggested that this lack of unity often resulted in a lack of *trust* and contributed to conflict between both parties. Results also suggested that the implications of these organisational omissions were contributing factors to attrition rates and were identified as undermining factors of both, effective *trauma management* and career longevity in veteran paramedics.

Results in the current paramedic study also identified similarities with Gibson and Tarrant's (2010) resilience characteristics of *learnability* with paramedic organisations. The current study results suggest that participant organisations did not share the same *learnability* proficiencies as the veteran paramedics. Many participants reported a lack of *learnability* characteristics from *management*, organisational *policies and procedures*, an overall *lack of support* from them, and a general lack of *trust* in the organisation. Results suggest that the organisations may not have earned from past experiences, nor learned lessons from past opportunities for growth and learning, especially when it came to supporting paramedics. These results also suggest that paramedic organisations were continuing to repeat unsupportive patterns of behaviour, which increased resentment and disunity between paramedics and their respective organisations.

These findings suggest that many paramedic organisations were considered by participants to be unsupportive, apathetic toward paramedic needs, and passive toward supporting paramedics sufficiently. The implications of this ongoing *lack of support* from organisations, and organisational *learnability* (Gibson & Tarrant, 2010), is that paramedics may continue to feel undermined in their *trauma management*, which could result in long term discord between paramedics and their organisation, current attrition rates could continue, and mistrust could prevail, despite any organisation's efforts to help meet the functional needs of its paramedics. On the other hand, results of the current study suggest that many effective Trauma sub-themes were very similar to *learnability* (Gibson & Tarrant, 2010).

Veteran paramedics very competently learned from past experience with trauma, learned very effectively about adapting to *trauma impact*, minimised long lasting effects, and refined *trauma management* strategies. The Personal sub-themes of *acceptance of outcomes, compassion, EI, personality* and *PTG*, the Training sub-themes of *early learning trauma management* and *practical based training,* the Trauma sub-themes of *down time, humour, job reviews, learning outlets early, multiple effective outlets, proactive trauma management, support networks,* and *work-life balance* were all suggested to have been acquired by the resilience characteristics of *learnability* (Gibson & Tarrant, 2010). The implications of these results suggest that veteran paramedic participants are very likely to continue working as paramedics until the age of retirement. Accordingly, if paramedic students could be taught the same influential variables of effective *trauma management*, it could greatly contribute to the reduction of work-related trauma and increase the average length of their careers. When individuals are resilient within an organisation, it facilitates a healthy resilient culture and can strengthen the organisation as a whole (Gibson & Tarrant, 2010). The following model, called the Resilience Development Model is the proposed conceptual and theoretical contribution resulting from the current study.

9.4 Resilience Development Model (RDM)

As a result of the current study, the Resilience Development Model (RDM) was created. As the title of the model suggests, the resilience of veteran paramedics was developed as the result of nine influential variables: 1. *Resilience training*, 2. *Emotional intelligence*, 3. *Coping strategies*, 4. *Support networks*, 5. *Personality*, 6. *Cognitive processing*, 7. *Organisational support*, 8. *Life experience with trauma*, and 9. *Frame of reference/Belief systems*. Results of the current study suggest that veteran paramedic resilience was greatly influenced by these nine elements. The theoretical contribution the RDM advances with regard to existing literature is that these nine elements might not only contribute to veteran paramedic resilience, but may also have the potential to help develop resilience in the rest of the paramedic population and have beneficial implications for other professions exposed to trauma. The elements are now discussed in detail.

9.4.1 Resilience training.

Results from the current study suggest that multiple variables associated with the *practical-based*, *on the road training* that veteran paramedics experienced as students constituted their *resilience training*. For veteran paramedics, this was a crucial experience and provided an environment where their trainers modelled how to effectively manage work-related trauma. Due to the significant influence of this variable, *resilience training* was included in the RDM. Based on results from the current study, a combined balance of both *theory* and *practical-based training* in trauma resilience would greatly benefit paramedics.

9.4.2 Emotional intelligence (EI).

Emotional intelligence (Mayer & Salovey, 1997) was also identified in the current study as a significant variable which influenced effective *trauma management*. For veteran paramedics high levels of *EI self-awareness* about *trauma impact* and how to proactively address their compromised state could be very advantageous. According to the results of the current study, the purposeful *training* and development of *EI* for paramedics could help improve and further develop paramedic resilience.

9.4.3 Coping strategies.

The acquisition and development of effective *coping strategies* was also identified as a crucial element of resilience for veteran paramedics. As the results of the current study suggest, the earlier paramedics learn multiple *coping strategies* in their career, the more resilient they could be, and better prepared to manage trauma. Results suggest that designing strategic and tailor-made coping strategies for each individual paramedic, as part of their student training curriculum, could help future paramedics develop their resilience to work-related trauma.

9.4.4 Support networks.

The fourth critical element in the RDM is *support networks*, such as family, friends and colleagues available to support paramedics in their personal and professional life. Veteran participants in the current study generally had at least one support network in their personal life that they relied upon when affected by trauma. On numerous occasions,

participants expressed how crucial these *support networks* were. The RDM theory suggests that the more *support networks* an individual has, the greater resilience they will have to effectively manage *trauma impact*.

9.4.5 Personality.

Similarities in *personality* attributes were identified as the fifth vital element of the RDM. Persistence through a traumatic situation, high levels of commitment to their beliefs, and perseverance through *trauma impact* were personality characteristics frequently outlined by veteran paramedics. While the area of personality and veteran resilience requires future research, the results of the present study suggest this to be an essential element of veteran resilience. According to the results of the study, and the theory of the RDM, specific personality characteristics contribute to not only veteran paramedic resilience but with further research, could also help identify predictors of resilience for future paramedics through the selection and recruitment process.

9.4.6 Cognitive processing.

Cognitive processing was the sixth crucial element of the RDM. The veteran paramedics' ability and capacity to process *trauma impact* was closely intertwined with *EI*. Veteran paramedics' introspection and the style of cognitive processing of trauma related information was evident as they talked through the effects of trauma. The theory of the RDM proposes that the effective cognitive processing of trauma greatly contributed to the resilience of veteran paramedics and would be beneficial to the general paramedic population and other professions exposed to trauma. The theory of the RDM suggests that developing and fostering this specific form of cognitive processing as part of a training curriculum is likely to contribute to trauma resilience.

9.4.7 Organisational support.

Organisational support was identified in the RDM as an essential element that influenced the effective trauma management of veteran paramedic resilience. The RDM theory suggests that organisations have a duty of care for the emotional and psychological well-being of their employees while on the job, especially since organisations are making money from the care that paramedics provide, and as they are directly responsible for

exposing paramedics to the trauma that affects them. Results from the current study suggest that organisational support influences job satisfaction and if paramedics feel neglected from an organisation, this can be a greater source of *trauma impact* than the work-related trauma itself. The theory supporting this element was that organisational support either greatly strengthens paramedic resilience, or greatly undermines it when paramedics are neglected (Gibson & Tarrant, 2010).

9.4.8 Life experience with trauma.

The eighth vital element of the RDM and its theory is that an individual's past experience with trauma, and how it was managed, is a good predictor of future *trauma management*. Many aspects of *PTG* were embedded within this RDM element because results from the current study indicate that the majority of veteran participants' past experience with trauma resulted in an individual growth and learning process. In theory, learning about a paramedic's past experience with trauma, and how it was managed, could not only help provide insights into future paramedic resilience, but might help identify risk factors and the provide knowledge about how to mitigate trauma impact at times of paramedic vulnerability.

9.4.9 Belief systems (Frame of reference).

Individual *belief systems* (frames of reference) were identified as the ninth important RDM element which contributes to paramedic resilience. The consistent beliefs identified across participants in the current study suggest that belief systems were important to paramedic resilience. At critical moments when they were negatively affected by trauma, these strong beliefs were more influential than the impact the trauma created. Many of the participant belief systems identified in the current study aligned with aspects of personality, but many beliefs such as religious beliefs, were independent of personality characteristics.

The theory behind this aspect of the RDM is that deep-seated personal beliefs greatly contributed to veteran paramedics' personal resilience and appeared to be more influential than *trauma impact*. On the basis of results from the current study, it is hypothesised that the belief systems of veteran paramedics were very consistent with Kahler's (1982) *persister* personality type and that the effective management of work-related trauma, and career longevity of participants, were greatly influenced by similar attributes consistent with this

personality type. Further research would be required to explore this hypothesis. The results of the current study, and the RDM theory, suggest that these collective nine elements contributed significantly to the effective *trauma management* and resilience of veteran paramedics which over time, led to *PTG* and the longevity of their career through effective *trauma management*. The Resilience Development Model (RDM) is outlined in Figure 9.2.

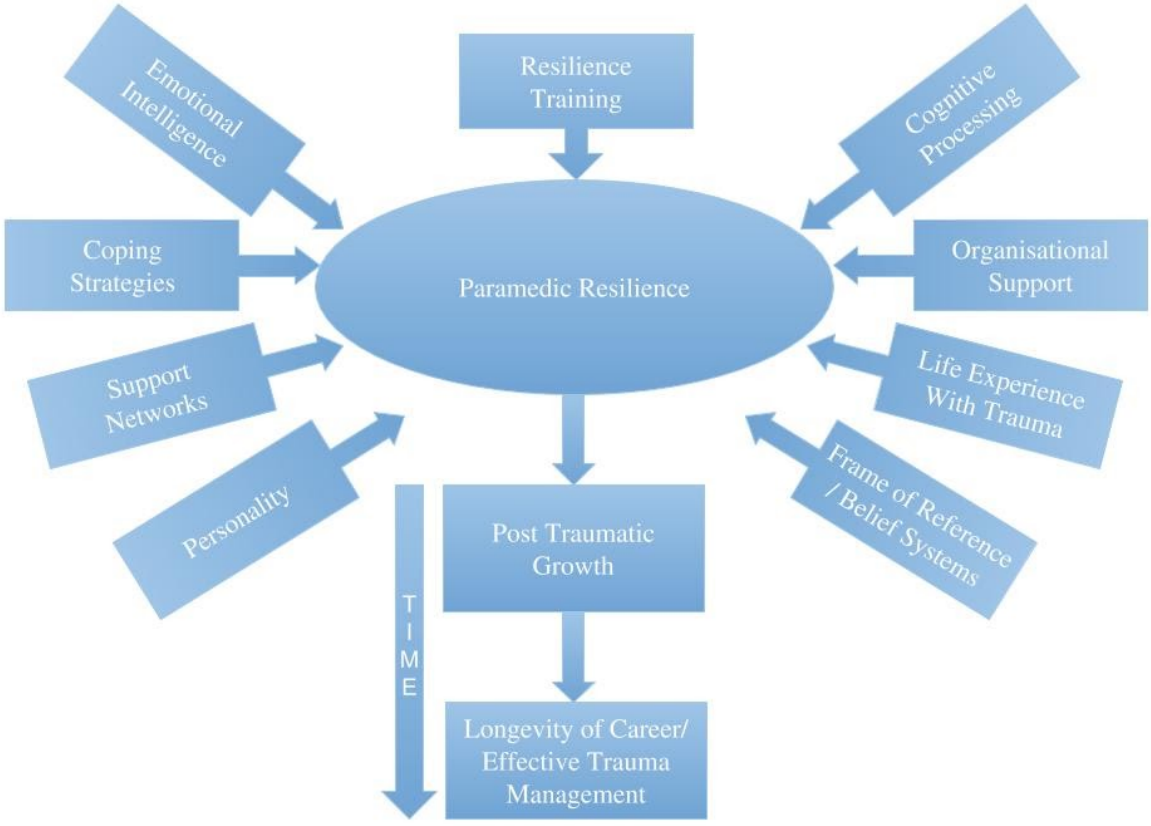

Figure 9.2. Resilience Development Model (RDM) collated from the results of the current veteran paramedic study. The nine arrows pointing to the centre oval of Paramedic Resilience are contributing factors identified from the results. The above model suggests that over time, these nine contributing factors lead to *PTG*, longevity of career and culminate in effective *trauma management*.

The RDM in Figure 9.2 outlines all essential variables identified by veteran paramedics in their multifaceted learning, growth, training and development of effective *trauma management* and career longevity. The variables of *resilience training, cognitive processing, organisational support, life experience with trauma, frames of reference/belief systems, emotional intelligence, coping strategies, support networks,* and *personality* variables have all been identified as contributing factors to effective *trauma management*, *PTG*, and career longevity of veteran paramedics. The definitions of each of these components are outlined in detail in the results section, so they will not be repeated in this section of the work. It is important to note that each of these contributing variables to veteran paramedic resilience originated from the veteran paramedics and were each identified as important to their effective *trauma management* and career longevity.

As the RDM illustrates, *resilience training* is the starting point for paramedic resilience. The theory behind the RDM suggests that many variables contribute to the veteran paramedics' effective management of work-related trauma. These are identified in the surrounding boxes of the RDM, with arrows pointing toward paramedic resilience. The RDM theory suggests that the more contributing variables are absorbed by the paramedic, the more resilient they will become and over time, paramedics will begin to experience *PTG*, which will also contribute to more effective *trauma management*, and a longer career.

9.5 The Researcher's Experience

9.5.1 Learning from the current research.

The researcher learned much from the current research study and associated process. Developing a clear, logical and systematic approach to the current study helped the researcher better understand how to design, develop, and carry out a thorough, peer reviewed, qualitative study. A healthy respect and appreciation was gained for the research process, which increased the desire for high quality research design and implementation for the future. An appreciation was gained for the thoroughness of the IPA qualitative research process, especially with the complexities and rigors of PhD level research. Even though an appreciation for qualitative research already existed, a deeper respect has developed for the IPA process and understanding the lived experience of veteran paramedics. The overall process was a valued experience for the researcher in personal and professional growth and learning. The greatest research based learning for the researcher took place from the

analysis of participant data using IPA. Learning IPA helped the researcher to develop deeper analytical skills and realise that the smallest of details could have great meaning. For example, during the data analysis stage, each word was scrutinised and all aspects of its meaning were explored.

Often the researcher found himself looking at all the possible reasons why the participant chose a particular word and then examined all the different ways that one word could have been interpreted. Over time, the researcher began to automatically scrutinise every semantic detail, which helped to improve analytical and critical thinking. This level of semantic scrutiny began to overflow into other areas of the researcher's life, as he scrutinised other literature during personal studies and searched for deeper meaning. The research process was also educational in teaching the concept that research results can only be as good as the planning, accuracy, and effort put into the research. The thoroughness of the PhD research structure and process helped the research student learn the importance of supervisors, to help provide guidance and direction to add to the researcher's understanding.

Much deeper knowledge and understanding was gained by; identifying the research topic, identifying clear research questions, linking existing theories and conceptual models to justify the research questions, identifying the best methodological approach to use that could help find the answers to the research questions, investigating the best analytical approach to use in analysing the data, learning how to best report the research findings in a way that would be clear and concise to fulfill the purpose of the current study. Every step was a learning and growth process, which was both difficult and quite rewarding. Conducting PhD research was much more complicated than any other undergraduate or postgraduate degrees previously completed by the researcher. During the process of conducting the current paramedics study, it was very challenging to work through the large volume of participant data, but looking back, the understanding and knowledge gained about PhD level qualitative research, the IPA methodology, and in-depth, qualitative research was invaluable. Learning the in-depth information about the veteran paramedics also provided much understanding about how participants learned to manage work-related trauma.

This understanding helped the research student to recognise the multiple contributing factors to the development of trauma resilience. An example of this beneficial understanding was learning about the influence that *EI* plays in paramedic resilience, which was surprising, and appeared to be a dominant contributing factor in the development of many other effective *trauma management* variables. How veteran paramedics developed their resilience, helped the researcher to learn what variables contributed the most to trauma resilience and to how to personally apply these principles. The Personal sub-themes of *EI* and *personality* appeared to be foundation variables upon which the majority of other resilience variables were built, which is supported by past studies (Petrides, Pita, & Kokkinaki, 2007). Understanding the influence that *EI* related variables had on the development of paramedic resilience, helped the researcher appreciate the subtle, but powerful influence that *EI* can have on an individual's well-being. The personal growth and learning that took place for the researcher will be valued and appreciated for the rest of his life.

In hindsight, the large majority of the research process of the current paramedic study would be conducted in the same way if it were repeated, with a few differences. There were many parts of the current study which were adapted as it progressed. For example, multiple readings and familiarity with participant transcripts was carried out before proceeding to the next step but it became easier to stay on one part of the participants transcript before proceeding through all six steps of the analysis instead of vice versa. Making this change after the second participant helped the researcher understand the participant content better, and to gain clarity on the significance of each respective step of IPA. There were many time constraints and difficulties in the process of gathering participant data, which made it difficult to wait for a gender balance of participants. While the gender balance was close, it would have been preferable to take the time needed to interview two more female paramedics, to get a balance of perspectives and experiences from males and females.

9.5.2 Positives and negatives of current research.

The positive points of the current paramedics research, for the researcher, were; interviewing participants, analysing results and seeing the answers to the research questions begin to emerge, and experiencing the personal learning and understanding of how veteran paramedics learned to effectively manage work-related trauma. Interviewing participants was very enjoyable, connecting with what paramedics were expressing, and reminiscing with them about the researcher's past experience working as an EMT in America. In several instances, participants had difficulty trying to articulate experiences that they believed only paramedics can understand, and because the researcher had worked in this field, the researcher believed a connection of common understanding existed, which helped elicit salient information from participants. Another enjoyable part of the current study was analysing participants' transcripts and identifying the themes that began to emerge in answer to the research questions. To see the answers to the research questions begin to materialise was an unexpected exciting experience. It was also very enjoyable to have an understanding about the skills, strategies, thoughts and habits that veteran paramedics developed. To see the strong influence that unexpected factors, such as *EI* (Mayer & Salovey, 1997), had on the participants effective *trauma management* techniques, was enlightening.

There are also a few negative points to note about the researcher's experience during the current paramedic study. The first negative experience was learning how little support participants experienced from their respective organisations. It was difficult to hear how much negative impact the paramedics felt that organisations could have on their well-being. Generally speaking, participants perceived their organisations to be apathetic about the well-being of paramedics, or inept to support them in the ways that they needed most. Another negative aspect of the current paramedic study was to hear how much work-related trauma the paramedics experienced, and their general acceptance that nothing can be done about it. It was difficult to hear how so many participants had resigned themselves to the negative effects of work-related trauma, as if it was not possible to change. The last negative point was hearing about the many paramedic suicides recounted by participants and the effect this had on them. Because of the relatively small local paramedic workforce, many participants knew several of their colleagues who have suicided over the past several years. Hearing the disappointment from many of the participants regarding their colleagues' deaths

was sad and discouraging, especially when many of the participants believed that many of the deaths could have been prevented.

9.6 Alignment Between Current Study and Research Questions

The aim of the current research was to design and develop a study which could help provide in-depth information about the veteran paramedics' experience and help answer the following two research questions:

1) What is the veteran paramedics' experience of managing work-related trauma?

2) What factors contribute to the longevity of a veteran paramedics career?

Results from the current study helped answer this first research question by learning that all veteran paramedics are affected by the myriad of different jobs they attend. Results of the current study suggested that the *frequency, intensity, and duration* of exposure to difficult jobs, contributed to the extent of *trauma impact* that they experienced. Generally speaking, the veteran paramedics' experience of managing work-related trauma was identified as difficult and challenging by participants, but they have learned very effective self-assessment, and *trauma management* strategies, to help them mitigate the risk of incapacitation from working with trauma. This effective management of work-related trauma was identified as a major contributing factor to the longevity of veteran paramedic careers and results outlined the specific individual, and organisational variables. The second question was answered by virtue of answering the first research question about the veteran paramedics experience. By identifying the Personal, Work, Organisational, Training and Trauma themes, with their respective sub-themes and elements, these same factors were found to contribute to the longevity of the veteran paramedics' career. Further exploration is needed to examine which themes, sub-themes and elements identified in the current study contributed the most to veteran paramedics longevity and the extent of influence each one had.

9.7 Development of the Current Research

The current research study developed very well and provided much more in-depth information than was anticipated. The design of the research questions helped elicit basic information, which was sufficient to provide some basic answers to the research questions, but probing questions from the semi-structured interview format provided much richer and more in-depth detailed information than was required and expected. During the analysis process, many more themes were identified than the dissertation's limitations would allow, but the most salient results from the themes, sub-themes and elements were reported. As the research has progressed, the combined results have developed into some practical strategies and helped provide sufficient basic information about what individuals can do to help improve their *self-awareness* about *trauma impact*, develop their *trauma management* strategies, and learn to be proactive toward *trauma management*. In addition, the results have also provided organisations and management with information which could help increase their understanding about their paramedic employees experience and know what they could do to improve their support, in the ways that paramedics need it. The current study was not expected to yield these types of specific practical *trauma management* strategies, but had elicited some very important and practical information.

9.8 Practical Applications of the Current Study

The current research appears to have numerous practical applications for paramedics. The practical implications of this study would be to help provide education and training about effective *trauma management* strategies to paramedics in all stages of their career. For paramedic students, it could be used to help develop training curriculums, to better prepare students for the *trauma impact* that they will experience throughout their career. Other implications for paramedics could be to help provide crisis care for paramedics currently in the workforce, who may be at risk. For veteran paramedics, information from the current study could help them continue to learn and gain insight about how their own learning, growth and development process and purposefully teach these skills and knowledge to the rising generation of junior paramedics they mentor. As for patient care, the more resilient paramedics are to trauma impact and the longer they stay in the workforce gaining more experience, the better the quality of care they are likely to provide to members of the

community. The current study could also have practical implications for other high risk professions vulnerable to *trauma impact*, such as emergency room doctors and nurses, police officers, firefighters, military personnel, and disaster relief workers. The *trauma management* strategies identified in this study are offered as a useful method of providing sustainable and lasting support, both directly and vicariously, to other professions outside the ones mentioned above. More research regarding the relationship between paramedics and other first responder professions is required to unearth commonalities in trauma resilience strategies.

9.9 Summary

In summary, the results of the current study were consistent with many aspects of individual, and organisational theoretical and conceptual resilience models. Numerous variables were identified in the current study which contributed to how veteran paramedics manage work-related trauma and the influence of this on the longevity of their career. Results from the current study suggested that the nine key variables of; *resilience training*, *emotional intelligence*, *coping strategies*, *support networks*, *personality*, *cognitive processing*, *organisational support*, *life experience with trauma*, *frame of reference/belief systems* are the foundations veteran paramedic resilience and the foundation of the Resilience Development Model (RDM). The next chapter will outline the recommendations identified as a byproduct of the current study.

Chapter 10: Recommendations and Conclusions

10.1 Introduction

Recommendations in this chapter are based on the researcher's observations and participant data. Participant insights have also been integrated into the researcher's recommendations to justify inclusion. Researcher recommendations are presented first, followed by participant recommendations. Recommendations are outlined in the following five areas of; *EI training*, *personality* assessment in selection and recruitment, organisational reviews of paramedics support and *trauma management training*. Researcher and participant recommendations are then followed by suggestions for future research and the chapter ends with concluding remarks.

10.2 Researcher Recommendations

10.2.1 Emotional intelligence training.

From the results of the current study, it is strongly recommended that future students, current students, and paramedics currently working in any capacity, receive education and training in *EI* development. It is hypothesised that *EI* development training would be very advantageous to help paramedics build upon their existing *EI self-awareness*, their ability to effectively articulate their own emotions, and in discerning the emotions of others. The development of *EI* for paramedics, especially in the area of *self-awareness*, could help paramedics identify their own precursors of negative *trauma impact* and help them recognise when they are becoming compromised. Participant comments in the results section not only emphasise paramedics' *EI self-awareness*, but also highlight the importance of them being self-aware enough to recognise *trauma impact* and the need to reconcile the negative implications of working with trauma.

As mentioned in the literature review, the results of Simha-Alpern's (2007) study with the 911 survivors found that the efficacy of therapeutic interventions was greatly improved with the individual's development of *EI,* whereas previously, progress toward *trauma impact* resolution for participants of the study had ceased. Participants in the current paramedic study suggested that *EI* training was needed to help medics be more aware of the effects that trauma has on them, how to recognise when they are emotionally and psychologically compromised, what to do to help mitigate trauma impact, and how to know

when they are no longer compromised. All of these factors appear to be supported and facilitated, to some degree, by EI (Mayer & Salovey, 1997).

10.2.2 Personality in selection and recruitment.

While no psychometric assessments were included in the current study, the results suggested a similarity of perception and traditional beliefs across participants, which points to a dominant, and common, PCM personality type of *persister* (Kahler, 1982). It is recommended that future research investigates this hypothesis. If confirmed, psychometric testing associated with the selection and recruitment process could help identify vulnerable or stoic tendencies among paramedic applicants. Concomitantly, it is recommended that organisations investigate the PCM methodology and its application to existing and future paramedics.

10.2.3 Organisational review of paramedic support.

The results of the current study suggest that organisational support can either greatly contribute to, or undermine, the effective *trauma management* of paramedics. *Trust* between paramedics and the organisation was identified as an important factor that influenced *trauma management*. It is recommended that organisations review their existing support strategies, by genuinely seeking paramedics' honest feedback about the efficacy of the organisation's support, actively listen with an open mind, to what support is needed and how it should be delivered, and then doing their best to provide their paramedics with the optimal personalised support possible. Such an initiative could also help heal *trust* issues between paramedics and their organisations as well as help foster an increased sense of community within organisations.

10.2.4 Trauma management training.

Participants suggested that additional education and training about beneficial trauma *avoidance and suppression*, as well as beneficial reconciliation strategies, could greatly contribute to improved *trauma management* and career longevity for paramedics. Participants readily acknowledged that as students, informal and impromptu *trauma management* strategies they learned early in their career from trainers and mentors on the road, were the foundations of effective *trauma management*. Many participants were unified

in their recommendations that strategic, effective *trauma management training* is required for paramedics. The *trauma management training* recommendations were recommended to further educate paramedics on the importance of *trauma impact* and effective *trauma management*. Factors in these recommendations include; the importance of taking *down time* between jobs, the allowance of discretionary *humour*, reviewing jobs from clinical, emotional, and psychological perspectives, having multiple effective *trauma management* outlets, being proactive in managing *trauma impact*, creating and utilising *support networks*, and being conscious of good *work-life balance*. It is also strongly recommended that an empirically grounded paramedic resilience training program be developed and standardised, as a core training component in all paramedic training programs and student curriculums.

10.3 Participant Recommendations

Participants were specifically asked to make recommendations about what they believed could be done to better support paramedics in managing the challenges they face when working with trauma. Veteran paramedics recommendations for training related to: 1) junior paramedic training, 2) improving new graduate confidence, 3) training certification for trainers, and 4) providing *trauma management training*.

10.3.1 Junior paramedic training.

Participants recommended better training for junior paramedics to help them acquire *trauma management* strategies early in their career. In addition to the aforementioned training in the areas of *trauma management* skills and *EI*, participants also emphasised the need to provide students with more exposure to *practical-based training* and receive more 'on the road' training. Participants expressed that juniors are not as clinically prepared as they should be, which they expressed was manifest by their lack of confidence in applying clinical techniques. Participants recommended that junior paramedics also need to be more emotionally and psychologically prepared for the *trauma impact* they will be exposed to. A large majority of veterans attributed the longevity of their career and effective *trauma management* to learning skills as junior paramedics themselves, during their *practical-based training* and this is the basis for these recommendations from veteran paramedics.

10.3.2 Improve new graduate confidence.

Participants recommended that building confidence in student clinical competencies would help them more effectively manage work-related trauma experiences. Veteran paramedics suggested that this could be done with more time and focus on practical skills training. Participants expressed the general lack of confidence that they observed in new graduates, especially during critical situations when there was pressure to perform quickly. Participants recommended that having more on the road *practical-based training*, and less theory based classroom time, would help improve the overall confidence of new graduates in their clinical skills.

10.3.3 Training certification for trainers.

Another recommendation made by participants was the importance of improved training for paramedic trainers and mentors. Participants suggested that the vast 'on road experience,' and the high level of clinical competencies demonstrated by their trainers and mentors in the *practical-based training* programs they were trained in, were instrumental in helping them to develop effective *trauma management* strategies. Generally speaking, the majority of participants expressed concerns about the quality of some of the local trainers, mentors, and training programs that students are taught by. The statements by participants suggested that they are not confident in the quality of teachers and training that students receive. As results of this study suggest, participants believed that the lack of paramedic registration bodies, who help ensure training standards for both students and certified trainers, has greatly undermined the standardised of training and qualified, certified trainers. Ensuring that paramedic trainers undertake a certification process prior to teaching could help increase the consistency, *credibility* and *dependability* of student training and thereby help ensure that high quality patient care is always received by patients.

10.3.4 Trauma management training.

It was also recommended that additional education and training be provided to paramedics in all stages of their career. Ideally, *trauma management training* would become a greater priority in all paramedic training programs as an additional pre-emptive strategy to help students be better prepared for the *trauma impact* before it occurs. *Trauma management training* could also help students recognise the importance of *trauma impact* as

well as the importance of 'unpacking' suppressed emotions from traumatic jobs to avoid the *compounding and cumulative* effects of trauma. Participants suggest that these training factors would be important for all paramedics, regardless of their clinical competencies or years of experience. Table 10.1 outlines the recommendations from chapter 10 and provides a brief overview of these.

Table 10.1

Recommendations From the Current Study

Researcher's Recommendations	Participant Recommendations
Emotional Intelligence Training	Junior Paramedic Training
Personality in Selection/Recruitment	Improve Graduate Confidence
Organisations Review Paramedic Support	Certified Paramedic Trainers
Trauma Management Training	Trauma Management Training

While the recommendations in Table 10.1 vary somewhat between the researcher and participants, it was agreed by both parties that *trauma management training* is required to help support paramedics in their management of work-related trauma. Throughout this paper, several suggestions were made about the need for future paramedic research in these areas to help develop an effective *trauma management training* program. Recommendations for future research will now be discussed.

10.4 Suggestions For Future Research

The results from the current study suggest that *EI* was an important aspect of effective *trauma management* for veteran paramedics. For this reason, future research in the area of *EI* among paramedics is strongly encouraged. Further investigation and measurement of *EI* among various paramedic age groups could help provide more detailed information about specific levels of *EI*, especially in the areas of *trauma impac*t, *trauma management* and attrition rates. Results from the current study also suggest that future research be conducted with paramedics in the area of *personality*.

Future studies investigating *personality* among paramedics could greatly influence and benefit selection and recruitment processes. This could help minimise risk to individuals more predisposed to work-related *trauma impact* and help optimise the benefits of employing people with more resilient personality attributes. Results from the current study suggest that *PTG* among paramedics also be investigated to help identify if *PTG* is an influential variable among different paramedic age groups. Other potential areas to investigate with *PTG* and paramedics is whether or not *PTG* exists among all veteran paramedics. If it does, such knowledge could be helpful in ascertaining at what stage of their career *PTG* begins to develop or what contributions *PTG* makes to resilience. It is also recommended that future research explore the applicability of *trauma impact* and resilience studies between paramedics and other high frequency trauma exposed professions.

While the number of male to female participants was marginally out of balance in the current study, this imbalance was largely due to the very limited number of female participants available in the accessible paramedic population who had more than 15 years experience. For this reason, it is also recommended that future studies focus on female veteran paramedics to help provide a better balance of information, as many of the paramedics studies to date appear to be male dominated. A gender balance of participants in the current study may have provided opportunities to identify gender differences for exploration in future studies. The generalisability of the findings from the current study remains moot. Suggestions were made that male and female paramedics experience may be similar, which may not necessarily be the case. Many similarities of experience were expressed from both male and female veteran paramedics about how they managed work related trauma but assumptions and generalisations about the similarity of the male and female veteran experience should not be assumed. Future research in this area should be explored to help gain more information in this area about potential gender differences among both veteran paramedics and the general paramedic population. The current study may have helped provide some insight into the veteran paramedics' experience, but in the process has also illuminated the need for future research between male and female veteran paramedics.

10.5 Summary

By virtue of completing the study investigating the *veteran paramedics experience of managing work-related trauma,* the researcher proposes the first two aims of the current research have been achieved: 1) making a unique contribution to the existing literature about the paramedic's experience of managing trauma; and 2) gaining an increased knowledge and understanding about managing trauma. The third aim, 3) to contribute toward addressing the difficulties that paramedics experience, has in part been achieved because the results have provided potential solutions for individuals and organisations to apply in practical settings.

In relation to answering the research questions of the current study: 1) What is the veteran paramedics' experience of managing work-related trauma; and 2) What factors contribute to the longevity of a veteran paramedics career? In large part, *the veteran paramedics experience of managing work-related trauma* was that they experienced countless trauma-related difficulties throughout their career. The large majority of these were identified as a type of "refiner's fire" by participants, which was perceived as greatly contributing to their personal and professional growth and betterment as a human being. At various times in the veteran paramedics career, and to varying degrees, the majority of participants experienced some kind of symptom associated with burnout, PTSD, depression, or anxiety, but have developed the abilities to reconcile many of these symptoms and their long-term effects. The five themes of Personal, Work, Organisational, Training, and Trauma, with their associated sub-themes and elements, do not represent all aspects of the participants' experience, but were identified as dominant contributing factors to the veteran paramedics experience managing trauma.

10.6 Conclusion

All recommendations outlined in this chapter were made to encourage the betterment of paramedics and to contribute toward helping paramedics more effectively manage work-related trauma and mitigate the difficulties they experience. While the current study may have helped illuminate some areas of future research, much more research is needed in the area of *resilience training and development* to help address the challenges that paramedics experienced working with trauma. Veteran paramedics in the present study have suggested that no paramedic can escape from the effects of, or are immune to PTEs and the

effects of *trauma impact.* While this may be true, veteran paramedics appear to have learned how to develop and refine effective *trauma management* strategies throughout their career. The original contribution that the current study makes to the existing empirical knowledge is that it specifically explored the experience of veteran paramedics and how this cohort manages working with patient trauma on such a regular basis. The first research question specifically asked: What is the veteran paramedic's experience of managing work-related trauma? From the researcher's perspective, this research question was answered through the qualitative approach by exploring the lived experience from twelve vetern paramedics about how they managed working with trauma throughout their career. Professed experiences were unique from one participant to another.

The information received from participants and their personal experiences about managing trauma helped to answer the second research question: What factors contribute to the longevity of a veteran paramedics career? The current study answered this second research question by identifying both the individual and collective thoughts, beliefs and coping strategies of participants used to help mitigate the emotional and psychological impact of the PTEs they experienced from working as a paramedic. It is hoped that the implications from the current paramedic study may in some way benefit the global paramedic community, paramedic organisations, family and friends of paramedics, and other professions at high risk from trauma exposure (McFall, Wright, Donovan & Raskind, 1999). Paramedics have been trained to provide emergency medical treatment to members of the community and literally save the lives of millions of people across the world each year. As a result of the life-saving skills that paramedics are trained to deliver, many paramedics are suffering from the *trauma impact* they are exposed to on a daily basis. Many veteran participants expressed the sense of gratification and fulfillment as they helped save dying patients and help return them home to their loved ones. It is considered that the experiences of veteran paramedics, as articulated in this study, can be profitably harnessed to better understand why those who stay in the profession the longest, choose to do so.

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Appendices

Appendix A: Ethics Approval Letter

THE UNIVERSITY OF NOTRE DAME AUSTRALIA

19 Mouat Street (PO Box 1225) Fremantle WA 6959
+61 8 9433 0555 | enquiries@nd.edu.au

22 February 2016

Professor Martin Philpott & Mr Ryan Jenkins
School of Arts & Sciences
The University of Notre Dame, Australia
Fremantle Campus

Dear Martin and Ryan,

Reference Number: 016001F

Project title: "The Veteran Paramedics' Experience of Managing Work Related Trauma."

Your response to the conditions imposed by the university's Human Research Ethics Committee, has been reviewed and assessed as meeting all the requirements as outlined in the *National Statement on Ethical Conduct in Human Research* (2014). I am pleased to advise that ethical clearance has been granted for this proposed study.

All research projects are approved subject to standard conditions of approval. Please read the attached document for details of these conditions.

On behalf of the Human Research Ethics Committee, I wish you well with your study.

Yours sincerely,

Dr Natalie Giles
Research Ethics Officer
Research Office

cc: Prof Sarah McGann, Dean, School of Arts & Sciences;
Prof Chris Wortham, SRC Chair, School of Arts & Sciences.

Appendix B: Recent Media and Government Releases

News Articles of Union Demands, and Legislative Investigation Requests

On November 25, 2014, union representatives for WA paramedics demands more trauma counselling following two paramedic suicides within the same week. www.abc.net.au/news/2014-11-25/paramedics-suffering-from-ptsd-need-more-counselling

On March 30, 2015, WA's chief psychiatrist was called on to investigate if there is any link between five suicides of serving and former paramedics over the past five years. www.abc.net.au/news/2015-03-30/push-for-parliamentary-inquiry-into-wa-ambo-deaths

On March 31, 2015, WA MP Adele Farina called for a parliamentary inquiry to be held due to the spate of paramedic and ambulance officer suicides. www.abc.net.au/news/2015-03-31/wa-mp-backs-parliamentary-inquiry

Appendix C: Veteran Paramedic Information Letter

THE UNIVERSITY OF NOTRE DAME AUSTRALIA

The Veteran Paramedics' Experience Managing Work Related Trauma

Veteran Paramedic Information Letter

Dear Participant,

Thank you for your time and interest in contributing to my PhD research in the school of Arts and Science at the University of Notre Dame. I am a past paramedic now investigating the veteran paramedics experience of managing work related trauma. This research is being conducted to better understand how paramedics who have worked 15 years or longer have managed to work for more than three times the average paramedic work life. Paramedics who work in various industries will be interviewed to help maintain confidentiality, anonymity and to help ensure no single organisation can influence the results. Results from this study are anticipated to help address some of the difficulties that paramedics' experience in hopes to help improve paramedic work life, retention rates, increase resilience, improve paramedic training, and ultimately, contribute to the quality of care that paramedics are able to provide to the community.

Participation in this research will consist of a one-hour interview. The audio-recorded interview will involve discussions about personal or professional strategies you have used throughout your paramedic career. It is possible that you may experience some level of stress during the interview as a result of recalling trauma related experiences. You are free to conclude the interview and withdraw any information provided during the interview. If these feelings persist after the interview has concluded, arrangements can be made for you to access counselling support as required. As part of a duty of care process, you will also be contacted approximately one month following the interview to help ensure there are no lasting affects from participating in the interview.

Information provided from the interview process will be held in strict confidence and your anonymity will be maintained at all times, except in circumstances required by law such as a court subpoena. At the completion of the study, electronic data and hardcopies will be stored securely for a period of 5 years in the School of Arts and Sciences at the University of Notre Dame Australia (Fremantle, W.A.), after which, research data will be destroyed. Upon conclusion of the research, a feedback summary of results will be provided to each participant and the full PhD dissertation will be available from the University of Notre Dame library.

If you have any questions regarding this research please contact me directly on 0433197229, by email: ryan.jenkins1@my.nd.edu.au or alternatively, you may speak with my supervisor and chief investigator, Dr Martin Philpott by email: martin.philpott@nd.edu.au. Your participation in this research is greatly appreciated.

Sincerely,

Ryan D. Jenkins

This research has received clearance by the Human Research Ethics Committee. If participants have any complaint regarding this research project, please contact the research student directly or Executive Officer at the University of Notre Dame Australia, ph: (08) 9433 0964; fax (08) 9433 0544, research@nd.edu.au

Appendix D: Introduction Letter for Organisations

(Cover Letter)

Ryan Jenkins

PhD Candidate

Mob: 0433 197 229

Email: ryan.jenkins@my.nd.edu.au

University of Notre Dame

Fremantle, W.A.

Date: / /

Name of Addressee

Name of Organisation

Address

Perth, W.A. Post code

Research Introduction Letter for Organisations

To whom it may concern,

I am a PhD research candidate in the School of Arts and Science at the University of Notre Dame. I am conducting research entitled: *The Veteran Paramedic's Experience of Managing Trauma* to investigate the difficulties that paramedics experience. Some of the difficulties that paramedics experience include symptoms of post-traumatic stress disorder (PTSD), depression, and burnout. Many of these symptoms contribute to the average 5-year paramedic work life. My research will consist of conducting a one-hour, one-on-one interview with veteran paramedics who have worked for over 15 years in an effort to better understand how they manage trauma. Results from this study could contribute toward improving paramedic retention rates, increasing resilience, improving paramedic training, help organisations know how to better support, and help the community continue to receive high quality care.

I would like to respectfully request your support for this research by distributing an electronic copy of the attached information letter to the paramedics within your organisation. Participant confidentiality and anonymity will be maintained at all times and a copy of the research results can be made available to you upon request, alternatively, results will be available as a PhD dissertation and stored at the University of Notre Dame library in Fremantle, W.A. Thank you for your time and consideration to support this research. Please feel free to contact me directly if you have any questions regarding this research.

Sincerely,

Ryan D. Jenkins
(PhD Candidate)

This research has received clearance by the Human Research Ethics Committee. If participants have any concern or complaint regarding this research project, please contact research supervisor and chief investigator, Dr. Martin Philpott on 9433-0218 or email: martin.philpott@nd.edu.au, or contact the Executive Officer at University of Notre Dame Australia, ph: (08)9433 0964; fax (08)9433 0544, research@nd.edu.au.

Appendix E: Veteran Paramedic Interview Schedule

THE UNIVERSITY OF NOTRE DAME AUSTRALIA

Individual Veteran Interview Outline

Date: / / Time:
Duration: Approximately 60 min.
Participants: Paramedics with 15+ years of work experience.
Participant Number:
Interview Location:
Materials Required: -Information Letters and Consent Forms
-List of Counsellors
-Pens/pencils
-Blank Paper
-Two audio recorders (extra batteries)

Preparation Instructions: Upon arrival at interview location, set up and test audio equipment.

Instructions: Ask participants to read through the information letter and ask any questions prior to signing the consent form. Provide counsellor contact information, remind participants they can stop the interview at any time and to seek counselling support paid by the university. Inform them that they will be contacted approximately 1 month after the interview as a follow up from the interview. Turn on audio equipment and commence interview.

Warm up/ice breaker questions:

1.) How long have you worked as a paramedic?

2.) What led you to pursue a paramedic career (5-10min)?

Main Interview Section:

3.) What difficulties have you experienced working as a paramedic? (10 min.)
Potential probing questions
a. What personal strategies did you use to help manage these difficulties?

b. What professional strategies did you use to help manage these difficulties?

4.) How has working as a paramedic influenced you in your life? (10 min.)
Potential probing questions
a. In your personal life?

b. In your work life?

5.) Do you think the way you manage working with trauma has changed throughout your career? If so, how? If not, why? (10 min.)

6.) What recommendations would you suggest to help students manage the trauma they will be exposed to throughout their paramedic career? (10 min.)

Potential probing questions
a. What recommendations would you suggest for training institutions to better prepare students for the impact of working with trauma?

7.) What can organisations do to provide additional support for paramedics? (10 min.)

Appendix F: Participant Consent Form

THE UNIVERSITY OF NOTRE DAME AUSTRALIA

The Veteran Paramedics' Experience Managing Work Related Trauma

INFORMED CONSENT

(Consent form retained by researcher)

I, *(participant's name)* _____hereby agree to being a participant in the above research project.

- I have read and understood the Information Sheet about this project and any questions have been answered to my satisfaction.
- I understand that I may withdraw from participating in the project at any time without prejudice.
- I understand that all information gathered by the researcher will be treated as strictly confidential, except in instances of legal requirements such as court subpoenas, freedom of information requests, or mandated reporting by some professionals.
- I understand that I will be contacted approximately one month following the interview, as a duty of care process, to help ensure no ongoing support is needed from participating in the interview.
- Whilst the research involves small sample sizes I understand that a code will be ascribed to all participants to ensure that the risk of identification is minimised.
- I understand that the protocol adopted by the University Of Notre Dame Australia Human Research Ethics Committee for the protection of privacy will be adhered to and relevant sections of the *Privacy Act* are available at http://www.nhmrc.gov.au/
- I agree that any research data gathered for the study may be published provided my name or other identifying information is not disclosed.
- I understand that interviews will be audio and/or video-recorded.

PARTICIPANT'S SIGNATURE:		**DATE:**	
RESEARCHER'S FULL NAME:			
RESEARCHER'S SIGNATURE:		**DATE:**	

(Student Researcher: Ryan Jenkins; Chief Investigator: Dr Martin Philpott

If participants have any complaint regarding the manner in which a research project is conducted, it should be directed to the Executive Officer of the Human Research Ethics Committee, Research Office, The University of Notre Dame Australia, PO Box 1225 Fremantle WA 6959. Phone: (08) 9433 0943, or Email: research@nd.edu.au