SPOUSES' EXPERIENCE OF SECONDARY TRAUMA AMONG EMERGENCY SERVICES PERSONNEL

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ABSTRACT

Emergency services personnel are potentially exposed to events involving trauma, suffering and tragedy on a daily basis, which could consequently lead to secondary trauma and post-traumatic stress symptoms. The images and feelings that are associated with continuously being exposed to traumatic situations are not limited to the emergency services personnel, who are primarily exposed to the event, but these events can also have an effect on the significant others in their environment, such as their spouses.

The aim of this study was to explore and describe the experiences of secondary trauma among the spouses of emergency services personnel. The research study followed a qualitative research approach, which provided in-depth descriptions and understandings of the participants' secondary trauma experiences. The research design was explorative and descriptive in nature. Purposive sampling was used to select eight (8) participants, who were the spouses of emergency services personnel.

The data was collected by means of semi-structured individual interviews and was analysed according to Creswell. Various research findings indicated that secondary trauma was prevalent in the emergency services industry and, in this current study, most participants indicated that it impacted their marital relationships. The experiences of secondary trauma among the spouses of emergency services personnel stemmed from their partners' repeated exposure to trauma, managing everyday job stress, safety fears, behavioural changes, dealing with their partners' emotional reactivity and emotional withdrawal from the family, following trauma exposure.

Based on some of the suggestions provided by all the participants, the researcher concluded the study with recommendations for future practice and future research, the main recommendation being that organisational support systems be made available to spouses and families of emergency services personnel.

KEYWORDS

Trauma

Secondary trauma

Post-traumatic stress disorder

Emergency medical services

Emergency service personnel

Spouses

Family systems theory

Ecological framework of trauma



ABBREVATIONS

CISM - Critical incident stress management

DOL - Department of Labour

EMS - Emergency medical service personnel

EMT - Emergency Medical Technician

ICAS - Independent Counselling Advisory Services

PTSD - Post-traumatic Stress Disorder

SACSP - Social Work Code of Ethics



DECLARATION

I hereby declare that the dissertation, 'Spouses' experience of secondary trauma among emergency services personnel', is my own work, that it has not been submitted for any degree or examination at any other University, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

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Full names: Kerry Lee Wheater

Date: November 2015

Signature:

DEDICATIONS

This academic work is dedicated to Jean Pierre Hartman, my dearest husband, and our soon to be daughter, Ava Lee Hartman, who were so tolerant and supportive of my long hours of work put into my thesis.

I would also like to dedicate this academic work to the brave men and women in emergency services all around the world, who put their lives at risk to serve, protect and save their communities.



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My appreciation also goes to the participants of this study, who engaged in the research and shared their experiences with me. I feel privileged to have been given the opportunity to listen to their stories and I hope that this research benefits them and their families in some way.

I would like to thank the University of the Western Cape for allowing me the opportunity to complete my thesis and to contribute to the world of research.

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CHAPTER ONE

BACKGROUND AND RATIONALE

1.1. Introduction

Emergency care has been a part of history for decades and throughout time men have devised different methods to transport the ill and injured (Maloney, 2003). The history of ambulance services began in ancient times with the use of carts and hammocks to transport incurable patients (Barkley, 1990). In the 1400's ambulances were first used for emergency purposes by the Spanish army and they introduced 'ambulancias' or military hospitals, in which medical and surgical supplies were put in special tents to treat the wounded, but the soldiers were not picked up for treatment until after the end of the battle, resulting in many dying on the field (Maloney, 2003). Advances in technology throughout the 19th and 20th centuries led to modern, self-powered ambulances in which a responding team provides preliminary care to patients on board the ambulance (FC Emergency Medical Services, 2015). Over the years Emergency medical services have saved numerous lives with ambulances, aircraft, and boats by providing care at the scene and carrying the ill and injured for further treatment (Maloney, 2003).

Emergency medical services are organisations that aim to ensure public safety and health by addressing and assisting in various emergencies. Emergency medical services are dedicated to providing out-of-hospital acute medical care, transport to definitive care, as well as medical transport of patients suffering from illnesses and injuries that prevent them from transporting themselves. In South Africa, emergency medical services are public or private

systems aimed at providing emergency ambulance services, which include emergency care and transportation to hospital (National Health Act, 2003).

Emergency Medical Services (EMS) is a network of services that involve personnel trained in the disciplines of rescue, stabilization, transportation, and advanced treatment of traumatic or medical emergencies, working together to provide first aid and medical assistance from primary response to definitive care (Mosby's Medical Dictionary, 2009). EMS personnel are exposed to a variety of traumatic incidents, such as: motor vehicle and motor cycle accidents; sexual assault; hijackings; armed robberies; suicides; shootings; domestic violence; and the whole spectrum of illnesses or chronic diseases (Edwards, 2005). EMS personnel often assist individuals that have experienced a trauma and trauma can be defined as 'an experience that is sudden and potentially deadly, often leaving lasting and troubling memories' (Figley & Figley, 2009).

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South African societies have been affected, either directly or indirectly, by some degree of physical and emotional trauma due to the violent history of Apartheid because thousands of people were exposed to traumatising events as a consequence of the political violence (Edwards, 2005). Due to the consequences of Apartheid and the high rate of crime, violence and motor vehicle accidents in South Africa there is a great need for emergency services (Edwards, 2005). According to the 'Arrive Alive' general road safety statistics (2013) in South Africa, approximately 100 people are seriously injured on roads daily, 40 lives, on average, are lost each day and up to 14 000 deaths per annum. EMS personnel will respond to the majority of these incidents. The decisions and actions of these EMS personnel, being the first medical responders, have the potential of saving lives and minimizing injury, therefore, the pressure of making fast and accurate evaluations could be great (Porter, 2008). Additionally, EMS personnel deal with the reality that, regardless of their actions, some

patients may not survive certain incidents, and certain situations may cause them question justice, fairness or logic (Porter, 2008). Their work environment changes and is unpredictable from call to call. EMS personnel are often exposed to: sleep disturbances; trauma; organizational stress; stressed reaction to alarm bells, as well as the overall mental demands of the job, which are all significant determinants of stress levels among EMS personnel (Brennan, 2002, as cited in Calhoun & Tedeschi, 2006). "Given all of these factors, the inherent occupational stress of this type of work can take a significant toll on the physical and emotional health of paramedics themselves" (Porter, 2008).

EMS personnel are at higher risk for psychological distress and burnout than the general population. According to Porter (2008), a review of literature indicates that the lack of peer support, a comprised attitude towards emotional expression and inadequate ways of coping may be predictive symptoms of psychological distress and burnout among this group of professionals. Most trauma studies have focused mainly on post-traumatic stress disorder (PTSD) and the primary victim's experience of trauma, whereas less research has been done with regards to secondary or indirect victims, such as family, friends, trauma workers and counsellors (Macritchie, 2006).

Secondary traumatic stress, also known as 'vicarious' trauma, is a stress response that can occur as a result of knowing, or helping, a traumatised or suffering person (Huggard, 2003). Secondary trauma can refer to the traumatic impact on individuals, who feel the intensity of the traumatic event through another person, even though they did not experience the event themselves (Figley, 2002). Furthermore, individuals could be traumatized, without actually being physically harmed, or threatened with harm themselves, by hearing the details of the trauma experience from someone else (Siegfried, 2008). Secondary traumatic stress

symptoms can mimic those of post-traumatic stress disorder (PTSD) and affected individuals may find themselves re-experiencing personal trauma, or notice an increase in arousal and avoidance reactions related to the indirect trauma exposure (National Child Traumatic Stress Network, 2011).

Secondary trauma can affect changes in memory and perception; alterations in the individual's sense of self-efficacy; a depletion of personal resources; and disruption in the individual's perceptions of safety and trust (National Child Traumatic Stress Network, 2011). Learning about a traumatic event carries traumatic potential and the indirect victims could involve family members, friends, neighbours, lawyers and counsellors (Figley, 1999). The traumatic events that EMS personnel may, therefore, discuss with their family or friends could cause secondary trauma and have an impact physically and emotionally on their loved ones. The findings of a study by Kail (2014) found that some EMS personnel choose not to talk about traumatic events with their families or partners - preferring to 'protect' them consequently denying themselves an outlet to process their experiences and appearing detached to their partners. Some EMS personnel are more unguarded about their experiences, which could create an emotional burden for the partners and families, causing strain, and possibly, secondary trauma (Kail, 2014). Children of EMS personnel could also be impacted by secondary trauma. Figley & Figley (2009) assert that children of Vietnam veterans, who had witnessed trauma on a regular basis, have reportedly displayed emotional, behavioural and physiological symptoms, similar to that of their parents, who were suffering from posttraumatic stress disorder (PTSD). Similarly, spouses and children of EMS personnel could exhibit the same emotional, behavioural and physiological symptoms that the EMS worker might present with. According to Alexander & Klein (2001) and Regehr et al. (2002) between one fourth and one third of paramedics show traumatic stress symptoms in the high to severe range at any given time (cited in King, Mar & De Longis, 2014). EMS personnel are also more prone to suffer from PTSD than the general population, and, according to Iranmanesh, Tirgari, & Bardsiri (2013), various studies indicate a PTSD prevalence rate of 20% - 22% among EMS personnel worldwide. Another study by Berger, Coutinho, Figueira, Marques-Portella, Luz, Neylan, & Mendlowicz (2012) used in a random effects model analysis to couple PTSD prevalence and show the established high prevalence rate of PTSD in paramedics (14.60%) in comparison to other EMS professions such as firefighters (7.30%) and police (4.70%), in which the prevalence of PTSD in paramedics was at least 6% higher than the other professions.

1.2. Theoretical framework

There are different models that have been identified to explain the association between secondary trauma and family problems. This research study focuses on the systemic approach, and particularly, family systems theory. Systemic approaches view problems in a contextual framework and focus on understanding, shifting and changing the current dynamics of relationships, families and work settings (Margolies, 2010). Family systems theory applies systemic thinking to family dynamics, problems and therapy, and postulates that the roles and behaviours adopted by individuals in a particular family, or context, are determined by the unspoken rules of that system, and the interaction between its members (Margolies, 2010). Bowen, (cited in Brown, 1999) one of the pioneers of family therapy, suggests that the main goal in therapy is, reducing chronic anxiety by facilitating awareness of how the emotional system functions, and increasing the levels of differentiation, where the focus is separating one's own intellectual and emotional functioning from that of the family's, by making changes for the self, rather than trying to change others.

Trauma can be viewed as a systemic entity as, by nature, it is interpersonal, given that traumatic experiences create memories, which are often co-constructed through interpersonal interaction with others (Figely & Figley, 2009). Every family member is connected through a system of overlapping and intertwining relationships, therefore, one family member's exposure to trauma on a regular basis could have a negative influence on the family system as a whole (Becvar & Becvar, 2006). Family members are not invulnerable to the stresses experienced by their loved ones, and job-related stresses, experienced in a variety of working environments, can be transmitted to other family members once the individual returns home (Regehr, 2005). The findings of Regehr (2005) suggest that job stress dampens the quality of marital interactions and causes the other spouse to feel more negatively toward the relationship, which could have an influence on the two-person system, as well as the nuclear family functioning that Bowen (cited in Brown, 1999) described.

The ecological model of trauma, created by Dutton & Rubinstein's (1995), is also explored in this study, and provides a theoretical framework for the development of secondary traumatic stress. The model includes the following categories in an attempt to explain the nature of secondary trauma: indicators of psychological distress; shifts in assumptions and beliefs about the world; and relational disturbances (Dutton & Rubinstein, 1995).

1.3. Problem formulation

Emergency service personnel regularly face traumatic, stressful and life threatening situations, which influences them physically, emotionally and psychologically. They are exposed to individuals who are seriously injured or dying, and therefore, witness human pain and suffering on a regular basis (Fjeldheim, Nöthling, Pretorius, Basson, Ganasen, Heneke, Cloete & Seedat, 2014). They have to make quick decisions and administer aid in an attempt

to save lives, often without support or reassurance. South African emergency service personnel are frequently exposed to secondary trauma due to the high death and crime rate (Fjeldheim et al., 2014).

Edwards (2005) found that nearly a third of emergency services personnel met criteria for Post-traumatic stress disorder (PTSD). PTSD remains a major public health concern in South Africa, not only from the past violence, but also due to the current high rate of domestic and criminal violence (Edwards, 2005). The images and feelings that are associated with being exposed to continuous traumatic situations are not limited to the paramedics, who are primarily exposed to the event, but these events can also have an effect on the significant others in their environment, such as their spouses (Young, 2004). Most of previous research studies have focused on investigating the experiences of secondary trauma and PTSD among paramedics but little research has been done on the impact of paramedic work and secondary trauma on their spouses (Porter, 2013). This research study, therefore, aims to explore and describe the experiences of secondary trauma among emergency service personnel spouses. Their personal experiences place them in the best position to provide a deeper understanding of this phenomenon.

1.4. Research question

What are spouses' experiences of secondary trauma among emergency service personnel?

1.5. Aim and Objectives

Aim:

To explore and describe spouses' experiences of secondary trauma among emergency services personnel.

Objectives:

- To explore and describe spouses' experiences of personal, behavioural and emotional changes in emergency service personnel;
- To explore spouses' experiences of personal, behavioural and emotional changes in themselves;
- To explore and describe the influence of secondary trauma on the relationship of emergency service personnel and their spouses.
- To explore and describe the coping mechanisms of the spouses of emergency service personnel.

1.6. Research methodology

The researcher adopted a qualitative research approach for this study to provide an in-depth description and understanding of the secondary trauma experiences of emergency service personnel spouses. Qualitative research is used to gain insight into people's attitudes, behaviours, value systems, experiences, motivations, aspirations, culture or lifestyles, and aims to explore and understand the meaning ascribed to social or human problems (Creswell, 2009). Qualitative research involves the analysis of any unstructured material, including naturalistic observations and subjective experiences (Rughoo, 2010). The approach is aimed at providing detailed and in-depth descriptions of the experiences of the participant, as well

as the meaning behind those experiences (Babbie & Mouton, 2003). A qualitative approach was, therefore, suitable for this study, as it helped the researcher to gain a more thorough understanding of secondary trauma experiences of the spouses of emergency service personnel.

1.6.1. Research design

This research study focuses on using a descriptive and explorative design with qualitative research. Exploratory research is conducted in order to gain insight into a situation, phenomenon, individual or community (Stebbins, 2001). The researcher needed to gain an understanding of the experiences of secondary trauma among the spouses of emergency services personnel, in order to acquire insight into this specific phenomenon. The "what" question in explorative research provided an understanding of the occurrences, persons or situations (De Vos, Strydom, Fouche, & Delport, 2011).

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This research also incorporates a descriptive design, which provides a richer meaning, aimed at giving a more accurate account of exactly what the participants experienced in their daily lives, and presents a picture of the specific details of a situation, social setting or relationship (Rubin & Babbie, 2001). The "how" and "why" questions are central to descriptive research, which complemented this research, by investigating how and why secondary trauma influenced the spouses of emergency services personnel.

1.6.2. Population and sampling

The **population** of a study refers to the subjects, persons, events or organisations which pose attributes that the researcher is interested in and that are relevant to the research problem (De Vos, Strydom, Fouche & Delport, 2002). Emergency services in South Africa assist a wide community in the Gauteng area and, for the purpose of this study,

different emergency service organisations in Gauteng, such as ER24, Netcare911 and Provincial ambulance services formed part of the population.

Sampling is a procedure used by the researcher to select participants for the study that represent the population (Babbie & Mouton, 2003). The selection of the participants was purposive, in line with qualitative research. Purposive sampling is a type of non-probability sampling, in that the researcher selected a particular sample, which was relevant to the purpose of the study, and was based solely on the judgement of the researcher (Rubin & Babbie, 2008). The researcher approached different emergency service companies, namely ER24, Netcare 911 and Hatzolah Emergency Services, in order to obtain permission to recruit eight spouses of EMS personnel to participate in this exploratory study.

1.6.3. Data collection

In qualitative research, data is gathered through observations, interviews, documents and audio-visual tools (Rubin & Babbie, 2008), and for the purpose of this study, data was collected by using individual in-depth semi-structured interviews. The interviews followed an interview guide, which served as a guideline for relevant topics that needed to be addressed (Rubin & Babbie, 2008). The semi-structured interview guide ensured standardization in the broad areas explored, but also allowed interviewers to pursue unexpected and unique avenues that may be important to some participants (Creswell, 2003).

1.6.4. Data Analysis

Data analysis should be conducted in steps starting with the specific and moving on to the general (Creswell, 2009). The researcher utilized these steps to analyse the data as follows:

Step 1:

The data that has been collected is organised and prepared so as to get a sense of the whole. This involves reading through the transcriptions carefully; transcribing and scanning the notes made during the interview; writing down any ideas that come to mind; sorting through and arranging the data.

Step 2:

Read through all the transcripts to get a thorough feel of the data obtained, which also helps determine the general meaning and tone being conveyed by the participants.

Step 3:

This step involves coding, which allows the researcher to organise the data into smaller, more understandable parts, and cluster similar topics together.

Step 4:

During this step the coding process allows the researcher to create descriptions and themes that describe the phenomena studied, and helps to build a more complex analysis by elaborating on the themes and topics that have emerged.

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Step 5:

The topics are categorised using the most suitable, descriptive words and the researcher conveys in written narrative the findings of the analysis.

Step 6:

The researcher then abbreviates each theme and the codes are assigned alphabetic numbers or roman numerals.

Step 7:

The information for each category is arranged and a preliminary analysis done.

Step 8:

Finally, the researcher recodes existing data where necessary. The researcher assigns meaning to the data obtained, through interpretation of the data and describing what has been learned.

1.6.5. Trustworthiness

It is important for researchers to evaluate the trustworthiness of qualitative research, and Krefting (1991) proposes the use of Guba's (1985) model for assessing the truth value of such studies. In striving toward trustworthiness, the researcher focused on four concepts, described by the model namely: truth value; applicability; consistency; and neutrality (Krefting, 1991).

The researcher applied **truth value** by ensuring that only the original information shared by the participants was used and that all data was a true reflection of the participants' lived and perceived experiences. The researcher ensured that his/her own interpretations, understandings and personal experiences did not influence the information received from the participants.

Applicability refers to the degree in which the findings can be applied to other contexts, which can be achieved by providing enough rich data for comparisons to be made with the findings of existing or future studies (Krefting, 1991). Through ensuring applicability, the researcher believed that similar results would be obtained, when research of the same nature was conducted in another context, using the same interview guide (Krefting, 1991).

Consistency of data entails 'whether the findings would be consistent if the enquiry was replicated with the same subjects or in a similar context' (Krefting, 1991: 2). Coding and recoding during the analysis phase also enhanced consistency. The researcher obtained consistency by ensuring that any variability in replicating the research could be tracked to identifiable sources, using the same sampling procedure.

The **neutrality** of the study was ensured by remaining free of bias, focused on learning from the participants' lived experiences, and not trying to control or manipulate them (Krefting, 1991). The data was analysed, independently, by an independent coder to ensure neutrality. The researcher, therefore, obtained trustworthiness by applying truth value, applicability, consistency and neutrality.

1.6.6. Ethical considerations

Permission to conduct the study was obtained from the UWC Senate Research Committee, as well as from the different emergency services companies, where the data collection took place.

- The participants were given a subject information sheet that contained a brief introduction to the study and informed them of their rights as participants. They had the right to withdraw from the study at any time, without any negative consequences. They, also, had the right to choose not to participate in the study. It was also communicated to them that they could omit any questions that they did not want to answer.
- Informed consent was obtained from all the participants to ensure quality and integrity. The participants were fully informed of all aspects of the study before being asked to sign informed consent to their participation. De Vos et al. (2002)

emphasised the importance of providing accurate and sufficient information to the participants, allowing them to make a voluntary decision regarding participating in the study.

- Cognisance was also given to any physical or emotional harm that could result from the study. Information that might harm the participants' employment, or embarrass them, would not be disclosed and would remain confidential (Babbie, 2010).
- Deception was avoided at all costs and the participants were not misled in any way.
 This implies that no information was withheld from the participants, neither was incorrect information supplied to coerce participation in the study (Corey, Corey & Callanan, 1993, as cited in De Vos et al., 2002).
- Personal privacy was respected at all times. The researcher obtained permission
 from the participants to audiotape the interviews and to make field notes. In
 maintaining anonymity, the participants were protected by not publically disclosing
 their identity, as the researcher used pseudonyms to protect the participants'
 confidentiality.
- Debriefing constitutes an imperative part of the research process, as it provides the participants with the chance to work through their experiences and address any negative feelings that emerge during their participation in the study (De Vos et al., 2002). Those participants, who needed debriefing, were referred to a social worker, based at an employee wellness company, called ICAS (Independent Counselling Advisory Services), arranged by the researcher, which would remain confidential. The researcher is also bound by the SACSP (Social Work Code of Ethics).

1.7. Significance of the study

To date there has been little overlap between the study of families and the study of trauma, yet trauma is by nature interpersonal and is, therefore, a systemic entity (Figley & Figley, 2009). Most research continues to focus, primarily, on individuals and largely ignore families, as well as the social support and mechanisms families develop for managing the unwanted consequences of traumatic events (Figley & Figley, 2009). This study intends to expand on the knowledge of the experiences of secondary trauma in South Africa, particularly with concern about family members of EMS personnel, a population often ignored. Due to the limited research conducted in this area, this study anticipates to contribute to the knowledge base that the impact this type of highly stressful and traumatic job can have on the families of emergency services personnel, particularly in South Africa. EMS personnel, as well as their family members could benefit from this study, as findings by Regehr (2005) assert that the aftermaths of traumatic events encountered by EMS personnel are not experienced by the personnel alone and the emotional consequences of these experiences can ripple out to their family members. Therefore, the anticipated outcome of this research would be to implement support structures and programmes for families, make available different coping mechanisms for the families of EMS personnel, as well as provide the adequate resources for individual and family therapy, where necessary.

1.8. Definitions of terms

• **Trauma** occurs when an individual has been exposed to a traumatic event, in which the following are present: the individual witnessed, experienced or was confronted with an event, or events, that involved actual or threatened death; serious injury; a threat to the physical integrity of self or others; or the individual's response involved intense fear, helplessness or horror (The Diagnostic and Statistical Manual of Mental Disorders, 2000)

- **Secondary trauma** can refer to the traumatic impact an individual may experience even though s/he was not directly exposed to the traumatic incident (Figley, 2002).
- **Post-traumatic Stress Disorder (PTSD)** refers to exposure to traumatic or stressful events and is characterized by four main clusters of symptoms, namely: intrusion symptoms, persistent avoidance of stimuli, negative alterations in cognition and mood associated with the traumatic event, and marked alterations in arousal and reactivity (American Psychiatric Association, 2013)
- Emergency Medical Services (EMS) are organizations that aim to ensure public safety and health by addressing and assisting in various emergencies (National Health Act, 2003).
- Emergency service personnel are a network of services that involve personnel trained in the rescue, stabilization, transportation and advanced treatment of traumatic or medical emergencies, working together to provide first aid and medical assistance from primary response to definitive care (Mosby's Medical Dictionary, 2009).
- **Spouse** is a husband or wife, considered in relation to their partner (Oxford English Dictionary, 2015).
- **Family systems theory** applies systemic thinking to family dynamics, problems and therapy, and asserts that the roles and behaviours of individuals in a particular family or context are determined by the unspoken rules of that system and the interaction between its members (Margolies, 2010).
- Ecological framework of trauma is a model that provides a theoretical framework for the development of secondary traumatic stress, which includes: the indicators of psychological distress; shifts in assumptions and beliefs about the world; and relational disturbances (Dutton & Rubinstein, 1995).

1.9. Overview of chapters

Chapter One: Background and Rationale

The main purpose of this chapter is to provide an introduction to the current research and introduce the key theoretical concepts that this study will explore. It provides the background and rationale for the study, as well as brief discussions of the theoretical framework and methodology. It also outlines the problem statement and the significance of the study. The research question, aim, objectives are stipulated and the definitions of terms are clarified.

Chapter Two: Theoretical Framework

This chapter discusses the main theoretical framework of the study, which includes both the Family Systems Theory by Murray Bowen (1950, as cited in Goldenberg & Goldenberg (2000) and the Ecological Framework of trauma by Dutton & Rubinstein (1995).

Chapter Three: Literature review

Chapter Three explores the literature in the field of traumatic stress, initially providing a brief introduction to trauma, discussing the differences between primary and secondary trauma, as well as the impact thereof. This chapter further explores the concept of post-traumatic stress disorder, as well as the various terms that have been associated with the disorder, in the context of emergency service work. Finally, the impact of secondary trauma on the spouses of EMS personnel is explored and how it could influence family functioning.

Chapter Four: Research methodology

This chapter describes the methodology of the study, which is a discussion on how the research was practically conducted and the theory investigated (Terre Blanch & Durrheim, 1999). The research question, aim, objectives, research design, sample, research procedure, ethical considerations and the data analysis are also discussed in detail.

Chapter Five: Presentation and Discussion of findings and results

This chapter discusses the findings with which the researcher found through data analysis as well as to achieve the objective of the study which was to explore and describe spouses' experiences of secondary trauma among emergency services personnel. The relevant demographic data, literature and theoretical integration of the results from the interviewed spouses will be presented and discussed.

Chapter Six: Summary of findings, conclusions and recommendations

This chapter involves a summary of the findings and recommendations from the study, and it further concludes the research.



CHAPTER TWO

THEORETICAL FRAMEWORK

2.1. Theoretical Framework

In this chapter, a relevant theory and a theoretical framework, significant to the research topic, will be discussed. Various models have been presented to explain the association between secondary trauma and family problems. This research study, however, focused on the systemic approach, particularly family systems theory (Murray Bowen, 1950, as cited in Goldenberg & Goldenberg (2000), concentrating on the underlying concept that each family member is connected to each other as a unified whole. The theory further asserts that if one family member is experiencing challenges, such as secondary trauma, other family members, and the system as a whole, could be impacted. The basic concepts of general systems theory (Ludwig von Bertalanffy, 1920, as cited in Toseland & Rivas, 2001) will also be discussed, as well as the fundamental concepts of family systems theory. Additionally, a theoretical framework, the Ecological framework of trauma (Dutton & Rubinstein, 1995), will be explored to better describe and understand the nature of secondary traumatic stress.

2.2. Origin of Family Systems Theory

Systemic approaches view problems in a contextual framework and focus on understanding, shifting or changing the current dynamics of relationships, families and work settings (Margolies, 2010). In the general systems framework, families can be perceived as dynamic systems, where members form inter-dependent networks, attempting to maintain order and a stable equilibrium, while functioning as a unified whole (Toseland & Rivas, 2001). In the late 1920s, Ludwig von Bertalanffy proposed the general systems theory, relevant to all living

systems, focusing on the pattern of relationships in a system, or between systems, instead of studying parts in isolation (Goldenberg & Goldenberg, 2000). This theory encouraged family therapists to focus on the transactions taking place between family members, rather than the separate characteristics of each member (Goldenberg & Goldenberg, 2000).

In the 1950s, Murray Bowen, the developer of family systems theory, followed some of these concepts and conceptualised the family as an emotional unit, a network of interconnected relationships, which can be best understood, when analysed within a multigenerational framework (Goldenberg & Goldenberg, 2000). Bowen believed that the driving force underlying all human behaviour came from the submerged dynamics of family life and the simultaneous interactions between family members for both distance and togetherness (Goldenberg & Goldenberg, 2000). The cornerstone of this theory is the notion that there are forces within the family that make for togetherness and the conflicting forces that lead to individuality (Goldenberg & Goldenberg, 2000). Bowen regarded family as an emotional system that comprised of the nuclear family, as well as extended family, regardless of whether they were living or deceased, or that they lived together (Becvar & Becvar, 2006).

The family systems approach is based on several basic assumptions that include: each family is unique, due to the infinite differences in personal characteristics cultural and ideological styles; the family is an interactional system, whose component parts have constantly shifting boundaries and varying degrees of resistance to change; families must fulfil a variety of functions for each member, both collectively and individually, if each member is to grow and develop; families pass through developmental and non-developmental changes that produce unpredictable amounts of stress, affecting all members (Becvar & Becvar, 2006). Figure 1 represents these assumptions.

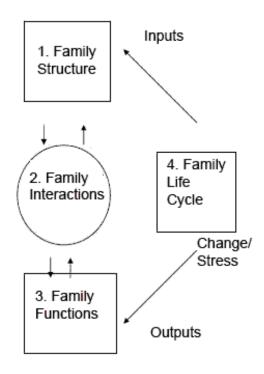


Figure 1: The Family System (Child Welfare Manual, 2015)

2.3. The basic concepts of General Systems Theory

In the general systems framework, the family is seen as a dynamic system, in which interrelationships of family members create a whole and the family system influences, and is influenced by, its members (Toseland & Rivas, 2001). The general systems model subscribes to a circular model of causality, which means that two or more elements reciprocally cause each other and that all parts of a system are interconnected (Becvar & Becvar, 2003).

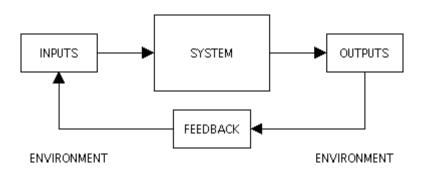


Figure 2: General systems model (Ludwig von Bertalanffy, 1968, as cited in Wiek, Dols, & Northam, 2009)

Circular causality moves away from a linear, dualistic approach towards holism and interconnectedness (Becvar & Becvar, 2003). It asserts that no system can be fully understood once it has been broken down into its component parts, and that no element can be understood in isolation, since it never functions independently (Goldenberg & Goldenberg, 2000). The theory also views a family as a cybernetically rule-governed system, which consists of boundaries and family rules, according to which a system operates (Becvar & Becvar, 2003). Based on the family structure, the family members follow organised, established patterns, which enable each person to learn what is permitted or expected of them, as well as others in family transactions (Goldenberg & Goldenberg, 2000). Implicit or unwritten rules are often beyond the person's level of awareness and are developed by observing family interactions and communications (Toseland & Rivas, 2001). These implicit rules can be either functional or rigid, depending on the situational context (Toseland & Rivas, 2001). Functional rules allow the family to respond flexibly to stressors, individual needs, as well as the needs of the family (Toseland & Rivas, 2001). A system can be seen as abnormal, when the rules between the system and other systems are seen as too open or too rigid, such as, too much individualisation and autonomy with too little support (Becvar & Becvar, 2003).

If a family system experiences disruption, the family tends to be directed towards maintaining homeostasis or equilibrium (Craighead & Nemeroff, 2004). Homeostasis is a systems concept that describes the function of a system, to maintain balance or equilibrium (Goldenberg & Goldenberg, 2000). Disturbed or troubled families try to regulate and maintain homeostasis in their family structure and will try to restore equilibrium, whenever their family system is threatened (Toseland & Rivas, 2001). Maintaining homeostasis entails cohesion within the family system, in which all members agree that doing so will be desirable, otherwise the

family can be divided into fractions (Toseland & Rivas, 2001). Family stability is actually rooted in change, meaning that the degree to which a family is functional, able to maintain a sense of adaptability, to preserve a sense of order, as well as promote change and growth within its members and the family as a whole, represents a family that is well-functioning and stable (Goldenberg & Goldenberg, 2000). Family systems also involve boundaries, which help define the individual independence of each separate member, as well as differentiate the different subsystems from each other (Robin & Foster, 2003). This, in turn, helps protect the integrity of the system, determining who is an insider and who remains on the outside (Robin & Foster, 2003). Systems that have continuous flow of information to and from the outside are considered open systems, whereas systems, whose boundaries are difficult to cross, are considered closed systems (Goldenberg & Goldenberg, 2000).

Systems also involve reciprocal processes, called feedback loops, which interact and feed back to one another, and can be self-corrective mechanisms, aiming to maintain the stability of a system in response to new information – feedback loops include both positive and negative feedback (Craighead & Nemeroff, 2004). Negative feedback entails feedback processes that oppose deviation, thus maintaining the norm by minimizing or resisting change, whereas positive feedback entails feedback processes that accept information about a deviation from how the system was operating, to accommodate change in the system by adjusting its structure (Craighead & Nemeroff, 2004).

Every symptom has a function in a system, and, from a circular perspective, the symptom is seen as having a function in terms of maintaining the balance or homeostasis of the system in which it is embedded (Becvar & Becvar, 2003). An example of a this is as follows: if parents of a child, who is displaying symptoms of schizophrenia, are having problems in their

marriage, the child may serve as a homeostatic mechanism, whose role will be to try and stabilise the poor marital relationship, as the parents need him/her in that role to avoid facing their difficulties – the child, therefore, acts as a negative feedback mechanism to disrupt positive feedback cycles of conflict between the parents (Becvar & Becvar, 2003). In the above example of feedback, the symptom maintains the system by acting as a negative feedback mechanism and the system maintains the symptom because the symptom is one part of a circular loop of behaviours (Becvar & Becvar, 2003).

2.4. The basic concepts of Family Systems Theory

A family can be viewed as a natural social system, which has its own, unique properties that are governed by both implicit and explicit rules, which specify the roles of its members, power structures and different communication styles (Hepworth, Rooney, Rooney & Strom-Gottfried, 2013). Families are organisationally complex systems that may encompass at least three generations. They inevitably attempt, with varying degrees of success, to arrange themselves into as functional a group as possible, so as to meet their collective defined needs and goals, without systematically preventing particular members from meeting their individual needs and goals (Goldenberg & Goldenberg, 2000). According to family systems theory, there are eight concepts that shape the family functioning which include:

- differentiation of self;
- Triangles;
- nuclear family functioning;
- family projection process;
- emotional cut off;
- multigenerational transmission process;

- sibling position; and
- societal regression

(Gurman & Kniskern, 2013).

These theoretical concepts are important to this study, as the family functioning can be influenced by secondary trauma and emergency service work. These concepts will be briefly explained below.

2.4.1. Differentiation of self

Differentiation of self is the extent to which an individual is able to differentiate between their own intellectual processes and their own feeling processes (Skowron, Wester & Azen, 2004) – it is the degree to which an individual is able to avoid having his/her behaviour automatically driven by emotion. Bowen expressed that differentiated individuals are capable of feeling their own emotions, while being aware of the feelings of others around them, as well as being able to maintain a level of objectivity and emotional distance (Bowen, 1950, as cited in Gurman & Kniskern, 2013). Bowen also introduced the concept of *undifferentiated family ego mass*, later called *fusion differentiation*, which describes a family's emotional oneness, and holds the view that maturity and self-actualisation entail that an individual becomes free of unresolved emotional attachments to his/ her family of origin (Bowen, 1950, as cited in Becvar & Becvar, 2006).

2.4.2. Triangles

According to Bowen, a two-person system or dyad is stable as long as it is calm and anxiety or stress is relatively low. The dyad, then, engages comfortably in the exchange of feelings (Bowen, 1950, as cited in Gurman & Kniskern, 2013). On the other hand,

when one, or both, of the individuals becomes stressed or anxious, either from internal or external factors, the stability of the situation is threatened (Gurman & Kniskern, 2013). One way to neutralize such an anxious two-person relationship within a family is to triangulate – draw in a significant family member to form a three person interaction (Goldenberg & Goldenberg, 2000). One of the dyad may seek a third party, or a vulnerable third person, who creates the triangle, which helps to dilute the anxiety, and is more stable and flexible than the dyad (Gurman & Kniskern, 2013). When the anxiety subsides, the two-person system can return to being a calm, peaceful system. However, if the anxiety persists, or is too great for the threesome, others may become involved, forming a series of interlocking triangles (Becvar & Becvar, 2006). There are times when triangulation could reach beyond the family, to include social agencies or the court (Goldenberg & Goldenberg, 2000).

2.4.3. Nuclear family functioning

Bowen asserts that individuals choose partners who have equivalent levels of differentiation to their own, and the concept of nuclear family functioning, or the nuclear family emotional system, defines basic relationship patterns that govern where problems develop in a family (Bowen, 1950 as cited in Gurman & Kniskern, 2013). These relationship patterns include: physical or emotional dysfunction; overt, unresolved marital conflict; and psychological impairment in a child (Goldenberg & Goldenberg, 2000). Clinical symptoms usually develop during periods of heightened or prolonged family tension, and the level of tension depends on the stress a family encounters, how it adjusts to the stress, and its connection with extended family and support networks (The Bowen Centre, 2015). Tension or anxiety increases the intensity of one or more of the above relationship patterns, and the specific symptom is largely

determined by the patterns of emotional functioning that dominate that family system (Goldenberg & Goldenberg, 2000).

2.4.4. Family projection process

This process describes the primary way in which parents transmit their emotional problems to a child – parents respond differently to each child in a family and pass their level of differentiation to the children (Gurman & Kniskern, 2013). The transmission of undifferentiating can occur through the mother-father-child triangle and this projection process can impair the functioning of one or more children and increase their vulnerability to clinical symptoms (Becvar & Becvar, 2006). The intensity of the projection process is associated to two factors, which include; the degree of the parents' immaturity or undifferentiating, and the level of stress or anxiety the family experiences (Becvar & Becvar, 2006).

2.4.5. Emotional cut-off

The concept of emotional cut-off focuses on the way individuals manage their unresolved emotional issues with parents, siblings and other family members, by emotionally distancing themselves or totally cutting off emotional contact with them (Titelman, 2013). Emotional cut-offs most often occur in families with high levels of anxiety or emotional dependence; however, relationships may improve if individual's cut-off to manage them, but the problems are dormant and not necessarily resolved (Titelman, 2013). Most individuals have some degree of unresolved attachment to his/her family of origin, but well-differentiated people have much more resolution than less differentiated people (Goldenberg & Goldenberg, 2000).

2.4.6. Multigenerational transmission process

Bowen proposed that severe dysfunction is conceptualised as a result of specific degrees of differentiation, transferred across generations. Small differences in the levels of differentiation between parents and their children can lead, over many generations, to marked differences in differentiation among the members of a multigenerational family (Bowen, 1950, as cited in Miller, Anderson & Keala, 2004). According to Bowen, it is important to note that the level of undifferentiation transmitted across generations is not constant, but rather tends to move toward a lower level of differentiation from one generation to the next (Bowen, 1950, as cited in Becvar & Becvar, 2006). The multigenerational transmission process will continue until unresolved emotional attachments and cut-offs are dealt with efficiently (Becvar & Becvar, 2006).

2.4.7. Sibling position

According to Bowen, the basic principle of sibling position and birth order is that there are fixed personality traits associated with an individual's position in the family of origin (Bowen, 1950 as cited in Miller et al., 2004). The theory behind this concept is that children develop certain fixed characteristics based on their sibling position in their family, which can assist the therapist to predict the part a child will play in the family emotional process, as well as which family patterns could be carried across to the next generation (Becvar & Becvar, 2006). Toman (1976, as cited in Miller et al., 2004) developed ten basic sibling profiles.

2.4.8. Societal regression

Bowen extended his thinking to society's emotional functioning and hypothesised that the same processes of dysfunction observed in families can be seen in larger society (Bowen, 1950, as cited in Gurman & Kniskern, 2013). Under conditions of chronic stress, both the family and society could lose contact with their intellectually determined principles and resort to an emotional basis for decisions that offer short term relief. This course of action could result in greater discomfort and further anxiety (Gurman & Kniskern, 2013).

2.5. Association between secondary trauma and the family system

Trauma can be viewed as a systemic entity because it is, by nature, interpersonal, given that traumatic experiences create memories that often are co-constructed through interpersonal interaction with others (Figely & Figley, 2009). Every family member is connected to each other through a system of overlapping and intertwining relationships, therefore, when one family member is exposed to trauma on a regular basis, the whole family system could be negatively impacted (Becvar & Becvar, 2006).

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Figley (1989) suggests that secondary traumatization could start with a family's (or friends') efforts to emotionally support their troubled loved ones, which could lead to attempts at understanding their feelings and experiences and, ultimately, empathizing with them. During this process, significant others could internalise the traumatized person's feelings, experiences and even memories, as their own, which could influence them to adopt similar symptoms (Dekel & Monson, 2010). Bowen is of the opinion that the repeated exposure to trauma, pressurised situations and increased stress levels of emergency services personnel (EMS), as well as their spouses, could develop into clinical symptoms during periods of heightened or prolonged family tension (Bowen, 1950, as cited in Goldenberg & Goldenberg, 2000). The level of tension depends on the stress a family encounters, how it adjusts to the stress, and its connection with extended family and support networks (Goldenberg & Goldenberg, 2000).

Family members are not immune to the stresses encountered by their loved ones, and jobrelated stresses experienced in a variety of working environments can be transmitted to other family members once the individual returns home (Regehr, 2005).

Research findings suggest that job stress dampens the quality of marital interactions and causes spouses to feel more negatively toward the relationship, which could negatively influence the two-person system, as well as the nuclear family functioning (Regehr, 2005). This may require triangulation to neutralise the situation, and may even require triangulation from an outside professional to assist the two-person relationship or the family system (Bowen, 1950 as cited in Gurman & Kniskern, 2013). EMS personnel, as well as their spouses may transmit their emotional problems to their child, or children, which could impair the functioning of one or more children and increase their vulnerability to clinical symptoms (Goldenberg & Goldenberg, 2000). Children inherit many types of problems (as well as strengths) through the relationships with their parents, and according to Bowen, if the projection process is fairly intense, the children may develop stronger relationship sensitivities than their parents, which increases their vulnerability to symptoms by fostering behaviours that escalate chronic anxiety in a relationship system (Bowen, 1950 as cited in Gurman & Kniskern, 2013). This behaviour or anxiety displayed by the EMS personnel, their spouses and their children could also be passed on from generation to generation, if not resolved, following a multigenerational transmission process.

Research has revealed that the primary focus of treatment has been on the individual who experiences the trauma, and not on their family members. If the traumatised individual is, therefore, receiving good results from individual therapy, the other family members may still be traumatised, while the traumatised individual is starting to heal, resulting in the family

system still being negatively affected (Figely & Figley, 2009). In systemic therapy, the 'identified patient' in a family (in this case, the traumatised individual) is viewed by the therapist as part of a larger system that is producing or sustaining the problem (Margolies, 2010). Figley & Figley (2009:182) indicate that "treatments should be systemic in considering the role of the family in conceptualising the trauma experience and alleviating symptoms of individual pain, while working with family members to assist this healing process". Similarly, it is vital to recognise and value the role of individualised treatment approaches, as long as they are attuned with understanding and respect systems implications for those who love, or live, with the traumatised individual (Figely & Figley, 2009).

Within a family system there are preferred ways of problem solving, decision making, as well as negotiating, and a family develops rules that outline the roles and functions of its members (Hepworth et al., 2013). There may be internal or external factors that impinge upon or disrupt family functioning, such as trauma, and when this occurs, the family aims to maintain homeostasis and restore equilibrium (Hepworth et al., 2013).

2.6. Theoretical framework of secondary trauma

Following on from the previous section, which focuses on the family system, several authors have developed theoretical models that attempted to explain the nature of secondary traumatic stress, as well as provide a theoretical framework for results from empirical studies to be understood (Beaton & Murphy 1995; Dutton & Rubinstein, 1995; Figley, 1995). Although there are a number of models in psychology and social work that provide theories that attempt to explain secondary traumatic stress, such as Figley's (1995) Trauma Transmission Model, this study will focus on one of the most widely used, and accepted, models by Dutton & Rubinstein (1995), the 'Ecological Framework of Trauma'. Firstly, the

Trauma Transmission Model will be explored, as the Ecological Framework of Trauma evolved from this model.

2.6.1. Trauma Transmission Model

Figley (1995) developed a Trauma Transmission Model from literature on traumatic stress, interpersonal relationships and burnout (see figure 3), which consists of two parts namely the model of compassion stress and the model of compassion fatigue (Figley, 1995). His model attempts to explain the process of trauma transmission and account for the reason that some people develop secondary traumatic stress, while others do not. Figley (1995) uses the term compassion fatigue, when referring to secondary trauma. He also refers to trauma workers, who are individuals involved in the helping profession, assisting victims of trauma; these include counsellors, social workers, psychologists, nurses and EMS personnel (Figley, 2003). The main concept of this model is empathy. Other aspects include; the trauma workers behaviour towards the victim, exposure to trauma, sense of satisfaction derived from helping, and the ability of the trauma worker to disengage from the process (Figley, 2003).

This model suggests that trauma workers attempt to understand the trauma victim by identifying with them. They try to comprehend the reasons for the traumatic event by answering Figley's (1995) five victim questions: What happened? Why did it happen? Why did I act as I did then? Why have I acted as I have since? If it happens again, will I be able to cope? The trauma worker tries to answer these questions for the victim, in order to adapt their own behaviour in accordance with their answers. In the process, the trauma worker experiences very similar difficulties, such as sleeping problems, to those of the victim (Figley, 1995). The model is represented in the following diagram:

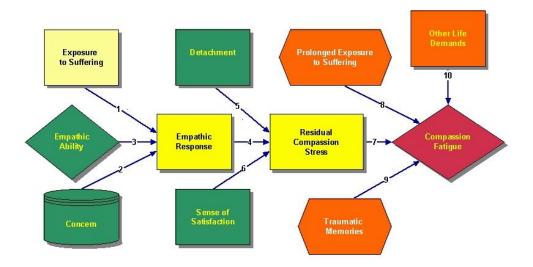


Figure 3: Model of Compassion Fatigue Process (Figley, 2001)

The model implies that exposure to suffering, empathic responses and concern could snowball towards the first stage of compassion fatigue, which represents empathic response (Figley, 2001). In the next step, empathic response, together with detachment and a sense of satisfaction, escalate into residual compassion stress. As the effects of a traumatic event gain momentum, residual compassion stress, together with prolonged exposure to suffering, traumatic memories and other life demands, result in compassion fatigue (Figley, 2001). The process of compassion fatigue is not a cluster of isolated events, but a blend of all the categories and their effects, as well as impact, on these categories (Figley, 2001).

Figley (1995) explains that prolonged exposure to traumatic material occurs as a result of the trauma worker's sense of duty that they continuously have to take care of and are responsible for their client. During this time the trauma workers feel that they are solely responsible for the victim, and are, therefore, unable to minimise their compassion stress. According to Figure 3, prolonged exposure to traumatic material leads to secondary traumatic stress.

There has been some criticism of this model, because it moves in a single direction and should be bi-directional, as information is continuously being fed into the system, in order to culminate in compassion fatigue (Rughoo, 2010). Furthermore, secondary traumatic stress can lead to traumatic recollections in a bi-directional course.

2.6.2. Ecological Framework of Trauma

Integrating aspects of Figley's Trauma Transmission Model, Dutton & Rubinstein (1995) developed the Ecological Framework of Trauma. This model was chosen for the study as it emerged to be more comprehensible and applicable to EMS personnel and their exposure to trauma than other models in this field, and could easily be integrated into a working model of secondary traumatic stress. The Ecological Framework of Trauma, represented in figure 4, incorporates features relating to secondary traumatic stress and provides a further conceptual development of secondary traumatic stress (Dutton & Rubinstein, 1995).

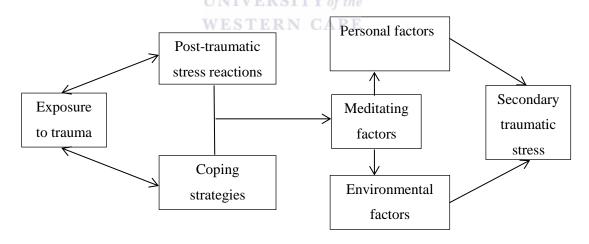


Figure 4: Ecological Model of Trauma (Dutton & Rubinstein, 1995)

There are a range of reactions that EMS personnel may experience due to their work with victims of trauma. According to Dutton & Rubinstein (1995), these reactions are categorised into three areas. The first category relates to *indicators of psychological distress* (e.g. avoidance efforts, intrusive imagery, addictive behaviours, and/or social

impairment). Indicators of secondary traumatic stress may include distressing emotions, impairment in day-to-day functioning, somatic complaints, physical arousal, numbing or avoidance and intrusive imagery (Dutton & Rubinstein, 1995).

The second category refers to *shifts in assumptions and beliefs about the world* (i.e. changes in cognitive schema) (Janoff-Bulman, 1992; McCann & Pearlman, 1990). Normal everyday living is based on assumptions that allow people to set goals, plan activities and direct their behaviour. These assumptions exist on a pre-conscious level and are thought to be disrupted by exposure to trauma (directly or indirectly), which causes psychological stress, as well as symptom formation, and can deflate an individual's life goals and aspirations (Janoff-Bulman, 1992).

The last category of reactions to secondary traumatic stress is *relational disturbances*. As a result of secondary trauma, the relationships of EMS personnel (both professional and personal) may suffer and they may isolate themselves in the workplace (Rughoo, 2010). Research reveals that this is particularly the case when working with victims of crime, especially incidences of abuse, which may increase their sensitivity to those same dynamics in their personal relationships (Macritchie, 2006). In addition, relational disturbances may occur in the brief relationship the EMS personnel can develop with the patient, as a result of mistrust between the client and EMS personnel (Macritchie, 2006).

With regards to these categories, Dutton & Rubinstein's (1995) theoretical model of secondary traumatic stress consists of four components:

1. the traumatic event to which EMS personnel are exposed;

- 2. the coping strategies of EMS personnel;
- 3. the post-traumatic stress reactions of EMS personnel; and
- 4. personal and environmental factors (Dutton & Rubinstein, 1995).

Since exposure to traumatic material is unique for every EMS worker, the traumatic material differs in intensity from one individual to another (Dutton & Rubinstein, 1995). This is due to five main reasons. Firstly, the traumatic material differs in degrees of severity from one victim to another. Secondly, the EMS personnel are not only exposed to traumatic material, but also to the emotions that the victim experiences in relation to the event (e.g. pain, anger, powerlessness). Thirdly, the EMS personnel are also exposed to the re-victimisation of their client, which may occur as a result of social systems. Fourthly, the EMS personnel are exposed to the realisation that this type of trauma does occur, which may, in turn, challenge their own cognitive beliefs. Lastly, the EMS personnel may also have to deal with previous trauma that their patient endured, which may resurface (Dutton & Rubinstein, 1995). All these different means of exposure to traumatic material make the nature of the exposure unique to EMS personnel.

The second component of this model involves coping strategies, which refer to the specific efforts, both behavioural and psychological, that people use to master, accept, reduce, or minimize stressful or challenging events (Taylor, 1998). An individual's coping responses have been found to be related to levels of stress and, according to Dutton & Rubinstein (1995), there are two types of coping strategies: personal (e.g. attending to personal needs, creating supportive relationships), and professional (e.g. peer supervision and discussion). These both link and connect to the individuals social

support network. The third component of the model involves the EMS workers' post-traumatic stress reactions, which can include: psychological distress; shifts in assumptions and beliefs about the world; and relational disturbances (Dutton & Rubinstein, 1995). These post-traumatic stress reactions were explored at the beginning of this chapter.

Dutton & Rubenstein (1995) also discuss the role of individual/personal and environmental factors, which they believe may be mediators of secondary traumatic stress. Individual factors comprise of the EMS personnel's inner strengths (high self-esteem), their resources (training and experience), their vulnerabilities (prior trauma history, counter transference), and their level of satisfaction in both their personal and professional life (Dutton & Rubinstein, 1995). Environmental factors are also important variables that influence EMS personnel's reactions to traumatic material, such as: social support, an organization's support for EMS personnel, the context within which EMS personnel work and live, and social, as well as cultural factors (Dutton & Rubinstein, 1995).

The above model was useful in recognizing some of the core components of secondary traumatic stress and how it develops (Dutton & Rubinstein, 1995), but it is flawed, to some degree, as it fails to mention the nature and location of these four components in relation to one another. Salston & Figley (2003) concur that the model requires testing and in order to gain further knowledge and understanding about secondary trauma, it is essential that effective research be continued. Despite these limitations, the model does provide a better understanding of the development of secondary trauma among EMS personnel.

2.7. Conclusion

In conclusion, this chapter offered a context for the understanding of how family systems

theory applies systemic thinking to family dynamics, problems, and therapy (Margolies,

2010). This provides an underlying theoretical framework for the study, because EMS

personnel may take their experiences of secondary trauma home, which could influence their

spouses and family functioning. This chapter also provided a better understanding of

secondary traumatic stress, how EMS personnel develop secondary traumatic stress, as well

as how secondary trauma could impact the family systems of EMS personnel.

An in-depth literature review follows in the next chapter, as well as a discussion on the

relevant concepts significant to the research topic, providing a comprehensive account of the

identified subject matters.

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CHAPTER THREE

LITERATURE REVIEW

3.1. Introduction

This chapter consists of a literature review, which is presented in terms of past research conducted and its relevance to this current study. The researcher discusses the relevant concepts significant to the research topic, providing an in-depth account of the identified subject matters. The literature review provides a background and history for the concepts of trauma, secondary trauma, and post-traumatic stress disorder, which serve as a cornerstone for the current study. The researcher explores the impact of interacting with traumatized patients, its effect on emergency service personnel and how this, in turn, affects the spouses of EMS personnel. The experiences of secondary trauma among the spouses of EMS personnel will also be discussed and previous research will serve as a foundation for exploring secondary trauma and recording its effects.

3.2. Understanding Trauma

Trauma has become a well-known, everyday word and there are different definitions to explain trauma. Trauma derived from the Greek word 'wound' and the examination of traumatic responses led to the inclusion of a distinct PTSD diagnosis in the third edition of the DSM (DSM-III; APA, 1980) and classified trauma as an event existing "outside the range of usual human experience (APA, 1980, p. 236)" (Jones & Cureton, 2016). The Diagnostic and Statistical Manual of Mental Disorders (2000: 155) brought a considerably more inclusive definition of trauma which described trauma as, 'the person has been exposed to a traumatic event, in which both the following were present: the person witnessed, experienced

or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others; the person's response involved intense fear, helplessness or horror'. For the past 13 years between the DSM-IV-TR (2000) and the DSM-5 (2013a) there has been considerable debate regarding how trauma has been defined and the core criteria of PTSD thus in 2013, the American Psychiatric Association revised the PTSD diagnostic criteria in the fifth edition of its Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (1) (Jones & Cureton, 2016). The fifth edition of the DSM (DSM-5), released in 2013 (American Psychiatric Association [APA], 2013a), contains considerable changes, including the reorganisation of 'Trauma- and Stressor-Related Disorders' into a new category and chapter which is now separate from 'Anxiety Disorders'; the restructuring of factors; the amendment of symptoms and specifiers; and the addition of a new subtype of PTSD in children (American Psychiatric Association, 2013). This will be explored further in the chapter.

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Currently, in the field of Social Work and Psychology, the word trauma is generally used to include reactions to both natural disasters (e.g. cyclones or earthquakes), and man-made violence (e.g. crime or criminal victimisation) (Matsakis, 1994). However, the exact elements of trauma are difficult to identify, as not everybody reacts to trauma in the same way. There are also a variety of individual factors, such as social support, personality, and specific circumstances, which will determine how the person will react to a traumatic event, their perceived severity of the event and the type of symptoms that will be experienced (Baldwin, 2004). Therefore, what may, or may not, be labelled as traumatic is highly subjective (Wilson, 1998).

3.3. Primary trauma in the EMS field

Primary trauma involves the direct exposure to a traumatic incident (Tudor, 2013). Most occupations have a certain level of stress associated with them, which does not necessarily include being exposed to trauma, but EMS personnel are unique, facing extremely stressful situations every day (Regehr, Goldberg, & Hughes, 2002). They are usually the first to arrive at the scene of an emergency, along with police or fire fighters, and respond to individuals in crisis, involving a diverse set of medical situations, ranging from minor injuries, such as nose bleeds, to causalities of serious road accidents. They aim to meet the needs of individuals, to care or treat illnesses and injuries (Alexander & Klein, 2001).

EMS personnel would mainly be indirectly exposed to traumatic events, but could also experience primary trauma, when they are directly involved in incidents such as an accident on the scene; injury on duty; the resuscitation of a patient; a psychotic patient who might become aggressive; or discovering at the scene that the patient is a close relative. The exposure to primary trauma, or critical incidents, can happen at any time for EMS personnel. Alexander & Klein (2001: 76) define a critical incident as, 'an incident that is sufficiently disturbing to overwhelm, or threaten, the individual's usual method of coping'. A study by Regehr et al. (2002) found that eighty per cent (80%) of paramedics, working in large urban areas, had experienced a critical incident in the EMS field such as the death of a patient in their care, the death of a child, multiple causalities, as well as violence perpetrated by one person on another. These researchers also found that seventy per cent (70%) of paramedics had been assaulted in the line of duty, and fifty-six per cent (56%) revealed that they had experienced a traumatic event that could have led to their own demise (Regehr et al., 2002). These critical incidents could severely impact the physical and emotional well-being of EMS personnel.

Gallagher & McGilloway (2008) conducted a qualitative study to explore the impact of critical incidents on ambulance personnel. Twenty seven (27) participants, with varying years of experience, were interviewed and indicated that the exposure to critical incidents had a significant impact on their health and well-being (Gallagher & McGilloway, 2008). A lack of support from management was also pertinent in their findings (Gallagher & McGilloway, 2008).

3.4. The impact of trauma

Trauma could have a severe impact on the daily needs and functioning of individuals, specifically emergency services personnel, which in turn could develop into long term effects. Relevant to this current study is Abraham Maslow's hierarchy of needs, which will be used to explain the impact that trauma could have on individuals and their daily needs (Retief (2004). EMS personnel are faced with trauma on a regular basis, which could influence their daily functioning and cause them to experience emotional and behavioural dysfunctions as a result of the trauma (Patterson, 2014).

Maslow (Retief, 2004) describes human behaviour in terms of a hierarchy of five levels of needs that must be satisfied in order to live a fulfilled life. These five needs are structured in a specific sequence, starting from physiological, safety, belonging, esteem, and self-actualisation (Retief, 2004). See Figure 5: for a diagram of Maslow's hierarchy of needs.

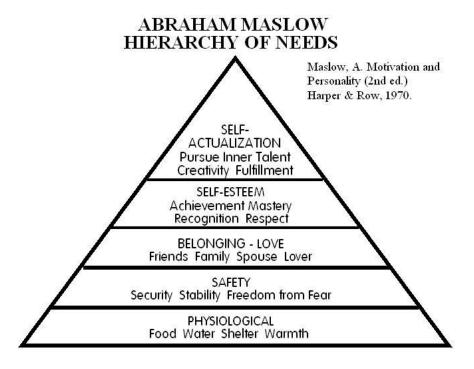


Figure 5: Abraham Maslow's Hierarchy of needs

Typically, individuals reach different levels of the hierarchy throughout life, and at times they might experience a deficit at a certain level, and originally Maslow suggested that once the first need has been fulfilled then the individual can start thinking about meeting the next level but research has found that individuals can operate on multiple levels simultaneously and that they do not have to progress in a linear fashion from one level to the next (Patterson, 2014). Traumatic experiences can affect each of these needs and cause an individual to feel unfulfilled in his/her life. Depending on the nature of the traumatic event, victims could be deprived of their most basic needs, such as air, food or water for a duration of time; or the consequences of trauma and physical effects could lead to a loss of appetite, sleeplessness and increased hyper-vigilance (Patterson, 2014). Trauma often involves a loss of, or threat to, physical and psychological safety, which affects the second level of needs on the hierarchy, leaving the individual feeling unsafe, in fear and instability (Retief, 2004).

The trauma worker's third level of needs could also be impacted by a traumatic incident, when a close relative/friend is physically injured, psychologically impaired or loses his/her life, due to the trauma (Retief, 2004). Trauma workers may isolate themselves and sever sources of social support, which is why it is necessary to find healthy ways to cope and seek support, when working through trauma (Patterson, 2014). Negative self-beliefs, or self-images, go hand-in-hand with trauma, as they could influence individuals to feel that they are losing control of their own lives; they may experience guilt and blame themselves for not being able to prevent the trauma; or question their actions at the time of the incident (Retief, 2004). In such instances, there is a loss of needs-satisfaction on the fourth level. It is evident, therefore, that if the first four levels of needs are not met, due to traumatic experiences, then trauma workers may not have the motivation or verve to develop and focus on their personal talents and self-actualisation (Retief, 2004). This may be true for EMS personnel, who are repeatedly exposed to trauma, as they may struggle to reach Maslow's fifth level in the hierarchy, when all the lower levels are consistently being influenced by the effects of primary and secondary trauma (Retief, 2004).

Professionals, who assist victims of trauma, including ambulance workers, police, fire fighters, nurses and social workers, could become secondary victims of trauma (Robinson, 1997). Secondary trauma is different to primary trauma, as it involves indirect exposure to a traumatic event, but could have similar effects as primary trauma (Tudor, 2013). Research by Figley (2002) reveals that traumatic exposure can be indirect and that secondary traumatic stress is almost identical to post-traumatic stress, including symptoms associated with post-traumatic stress disorder (PTSD) such as intrusive symptoms, persistent avoidance, marked alterations in arousal and reactivity, distressing emotions, negative alterations in cognition and mood associated with the traumatic event (American Psychiatric Association, 2013).

EMS personnel could, therefore, experience secondary trauma as result of repeated exposure to trauma and critical incidents.

3.5. Secondary trauma among EMS personnel

As described above secondary trauma refers to the traumatic impact an individual may experience, even though s/he was not directly exposed to the incident. This impact can result from wanting to help a traumatized or suffering individual; experiencing the intensity of a traumatic event through the traumatized victim; or by witnessing the event from a distance (Figley, 1995). Many emergency personnel suffer from secondary trauma, as well as high occupational stress, due to witnessing trauma, or death, on a regular basis (Mildenhall, 2012).

Past literature suggests that there is a strong relationship between exposure to traumatic events and physical or psychological well-being (Everley & Lating, 1995). EMS personnel, as a result of the work they perform, and the nature of the incidents to which they are exposed, are extremely vulnerable to the damaging and harmful effects of stress and trauma (Mildenhall, 2012). To protect themselves, EMS personnel may dissociate to some degree, detach themselves from others, become overwhelmed with helplessness or become emotionally numb (Salston & Figley, 2003).

Alexander & Klein (2001) found that eighty-two per cent (82%) of the paramedics in their study experienced a disturbing or critical incident in the previous 6 months, and that sixty-nine per cent (69%) of the respondents stated that they 'never' had sufficient time to recover, emotionally, in between traumatic events, highlighting their frequent exposure to trauma and the psychological impact of their profession. According to Beaton's (2003: 11) study findings, 262 fire-fighters, police officers and paramedics across North America, died in the

line of duty in 2002, with hundreds more resigning, or taking early retirement, due to stress-related illnesses. Maguire & Smith (2013) collected data from the Department of Labour (DOL), Bureau of Labour Statistics, to identify injuries and fatalities among EMTs and paramedics from 2003 through to 2007. Their findings revealed that, of the 21,749 reported cases, 21,690 involved non-fatal injuries or illnesses that resulted in lost work days among EMTs and paramedics within the private sector. During the study period, 59 fatalities occurred among EMTs and paramedics, in both the private industry and in the public sector, of which 51 (86%) were transportation-related; 5 (8%) were assaults; and 33 (56%) were classified as multiple traumatic injuries. This research found that EMS personnel have a rate of injury that is about three times the national average for all occupations in the United States (Maguire & Smith, 2013).

EMS personnel, therefore, are at higher risk for psychological distress and burnout, than the general population, due to factors such as continuous exposure to life threatening and traumatic situations; fast paced, unpredictable working environment; pressure to make quick and life changing decisions; risk of injury on duty; irregular working hours; and the lack of peer or managerial support (Porter, 2008). De Witte (2005), Slabbert (2008) and Pillay (2009) concur that health care providers, which include EMS personnel, in South Africa face a number of difficulties, given the nature of their profession. Makie (2006) and Smit (2006) also confirmed that burnout, secondary trauma, abuse by patients and high workload, due to insufficient staff, were responsible for the lack of satisfaction experienced by South African health care professionals. More insight into the nature of South African society will be discussed in the next section, which will assist in locating the study within a particular context. This section also highlights the high levels of crime in South Africa and the need for additional EMS personnel.

3.6. Trauma in the South African context

In Africa, the most systematic research on the psychological consequences of primary trauma has been done in South Africa by Edwards (2005). Previously, thousands of South Africans witnessed traumatic events, either as a result of the political violence under the apartheid regime, directly prompted by the actions of the military and the police, or by being caught up in the conflict caused by politically motivated violent activity (Edwards, 2005). In addition, South Africa's injury death rate has been found to be nearly twice the global rate average (Young, Koortzen & Oosthuizen, 2012).

Post-traumatic stress disorder (PTSD) remains a major public health concern in South Africa, not only from the past violence and human rights abuses, during Apartheid, but also due to the high rate of domestic and criminal violence (Edwards, 2005). In a study on trauma and PTSD in South Africa, Atwoli, Stein, Williams, Mclaughlin, Petukhova, Kessler & Koenen (2013) found that, from a total sample of 4,315 adults, over 70% of the population was exposed to at least one post-traumatic event in their lives, in which, unexpected death of a loved one, witnessing death, seeing a dead body or witnessing someone getting seriously hurt, accounted for over two fifths of all reported post-traumatic events. Atwoli et al. (2013) also found that witnessing events, many of which included violence, accounted for fifty per cent (50%) of the relative PTSD burden and were associated with a very long duration of symptoms. This may reflect the fact that political and criminal violence often occurs in public settings in South Africa, and highlights the importance of the political and social context in shaping the risk of PTSD related to specific events (Atwoli et al., 2013). EMS personnel in South Africa witness dead bodies and seriously hurt individuals regularly, while providing out-of-hospital acute medical care, as well as transporting patients, and are, therefore, at a higher risk of developing PTSD, than the general population (Iwu, 2013).

According to the South African Police Services national crime statistics (2012), crime in South Africa is currently still extremely high. A total of 543 856 deaths (natural and non-natural death) occurred in South Africa in 2010; 105 673 occurred in Gauteng. In addition, a large majority of deaths in 2010 were due to natural causes, consisting of certain infectious and parasitic diseases (Crime Statistics South Africa, 2013). Nearly ten per cent (10%) of deaths were due to non-natural causes, which resulted from other external causes of accidental injury, namely, transport accidents and assault (Crime Statistics South Africa, 2013: 60-61). Additionally, the statistics also revealed that 48% of deaths took place in health facilities, while nearly 30% (29,7%) took place at homes and 2,2% of the deceased were already dead by the time the paramedics arrived.

In a study on predictors of health symptoms among emergency medical services personnel, Van der Ploeg & Kleber (2003) stated that emergency medical personnel work in high risk environments, replete with health symptoms such as fatigue, burnout, and post-traumatic symptoms. They also found that support from supervisors and adequate communication were some of the important factors that influenced these health symptoms. Roth, Reed & Zurbuch, (2008) paint a harsh picture of the working conditions of emergency medical services workers, stating that EMS personnel are placed in high stress situations on a daily basis and they operate in a variety of environments, including all types of weather and terrain, as well as exposure to violent patients or aggressive bystanders at the trauma scenes. They support the view that these health threats are a source of stress that EMS personnel and their families must grapple with on a daily basis.

The aforementioned statistics support the notion that EMS personnel in South Africa are exposed to high incidences of death and trauma on a regular basis, and the nature of their occupation places them at a higher risk for developing post-traumatic stress disorder. It is important to understand the impact of emergency work on EMS personnel.

3.7. Stress and coping in the Emergency services

EMS personnel, in performing their daily duties, experience many challenges that could lead to severe stress, burnout, physical illness, secondary trauma, as well as a decrease in their quality of life and their service provision (Iwu, 2013). For the purpose of this study, it is vital to explore the stresses that EMS personnel face, behavioural or emotional changes that may take place, as well as different coping mechanisms that may assist them to cope with the nature of the vocation.

3.7.1. Stress defined

Stress is a topic that has been widely researched in the field of social work and psychology, and, therefore, the definition of stress is contentious, but in a general sense, refers to a situation where the needs of an individual exceed the means s/he can draw upon (Porter, 2013). Stress can be any negative psychological, emotional, physiological or physical impact on a person from an external, or external, source and its symptoms include muscle tension, clamminess and an increased heart rate (Haseed, 2002). Stress has many negative effects; hence, managing stress is important for individuals to lead a happy, balanced life. It is also important to note that, although stress is contingent, to some extent, on the surrounding environment, the stress response is also influenced by the mediating role of an individual's interpretation and evaluation of the surroundings (Porter, 2013).

Duffy & Wong (1996) regard stress responses as varying from physiological reactions (ulcers or high blood pressure) to psychological responses (avoidance of a stressful event in the future). Avoidance, as one of the stressful responses, may persist until the individual develops post-traumatic stress disorder. It has been established that EMS personnel are negatively impacted and experience stress related symptoms, as a direct result of their occupation, as opposed to other professions (Zimmerman, 2012; Regehr & Bober, 2005). Stressors that they experience include exposure to trauma, poor working conditions, challenging weather, lack of respect from members of the public, lack of support from management, excessive paperwork, shift work, threats of violence and health threats (Porter, 2013). Reactions to these stressors include absenteeism, low morale, emotional burnout, anxiety, frustration, depression, anger, fatigue, as well as PTSD (Iwu, 2013). It is, therefore, vital, especially in this line of work, for individuals, as well as organisations, to monitor their stress levels and manage these appropriately.

3.7.2. Behavioural and emotional changes

As discussed previously, EMS personnel face high levels of stress and are exposed to trauma frequently, which can interfere with their ability to perform their duties and could lead to emotional and behavioural changes. Some of these changes include decreased job satisfaction, abrasiveness, making constant excuses, unpredictable behaviour, moodiness, decreased communication, lethargy, or increased sick leave (Herman, 2000).

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Literature has revealed that emergency service personnel, specifically, may exhibit different behavioural changes, such as mood swings, emotional numbing, hypervigilance, anxiety and exaggerated concern for safety, due to the nature of their

occupation (Regehr, 2005). Previous research by Shantz (2002) on the effect of work-related stress on fire-fighters and paramedics has demonstrated that the brain becomes conditioned by repeated encounters with stressful circumstances, or by a single traumatic event with repeated psychosocial stressors, and begins to react under emergency conditions, even when no actual emergency occurs. Sherin & Nemeroff (2011) concur by explaining that repeated encounters with psychosocial stressors initiate stress responses in individuals, which influences the body to be chronically and continuously in a state of psycho-physiological arousal. The effects of such a condition would include chronic elevation of blood pressure with no evidence of congenital circulatory defect, gastrointestinal distress, sleeplessness, abrupt change in mood patterns, withdrawal from normal activities, inappropriate emotional reactions to normal circumstances, inability to defuse after a call is cleared, high risk behaviour and psychophysiological distress (Sherin & Nemeroff, 2011).

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Due to repeated trauma exposure, EMS personnel may also become hyper-vigilant, which involves a persistent sense of insecurity, preoccupation with possible unknown threats, constantly watching and scanning surroundings and being easily startled (Iranmanesh, Tirgari, & Bardsiri, 2013). Emotional numbing is one of the behaviour changes that may take place and is used as a strategy to cope with stressful events. However, this can further isolate family members as 'research has suggested that numbing, related to traumatic stress reactions, is significantly associated with negative feelings of family members toward the relationship' (Regehr, 2005: 4). Post traumatic symptoms can also influence EMS personnel to become over concerned about the safety of their spouse or family (Regehr, 2005).

Kail's (2014) findings suggest that there is reluctance from individuals in the emergency services to seek help early, before the issues or problems that they might be experiencing became critical. This reluctance is related to both physical and mental health needs and may be due to a 'hero, not victim' self-image inhibiting emergency service personnel from recognising their own support needs, or acting on these needs when identified (Kail, 2014). As a result, stress, anxiety, fatigue, and post-traumatic stress symptoms may build up over a period of time, influencing behavioural changes in the EMS personnel, creating a potential ripple effect for their spouses. All occupations are potentially stressful at one time or another, but emergency work, in particular, could be very stressful, and if stress is not managed, it could lead to ill-health (Mashigo, 2010). Coping mechanisms, therefore, play an important role in managing the frequent pressures of emergency service work and will be explored in the next section.

3.7.3. Coping mechanisms

Lazarus & Folkman (1984: 141, as cited in Harper, 2013) defined coping as the 'constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person'. Factors, such as age, gender and personality play a part in influencing a person's ability to deal with, or manage stress, which directly impacts their ability to cope or not (Porter, 2013). According to Collins (2007), coping is the process of executing a mentally conceived response to a perceived threat to the self. An individual's support system, his/her personality characteristics, values, commitments, goals and beliefs about him/herself, as well as the world, helps to define the stakes that the individual identifies as having relevance to well-being in a specific stressful encounter (Porter, 2013).

A review of literature on stress reveals that individuals in a range of professions usually take two approaches to reduce psychological and physiological stress, namely, positive coping mechanisms or negative coping mechanisms (He, Zhao & Archbold, 2002). Positive coping mechanisms usually involve having support from family and friends, or a strong social support system, in an attempt to reduce the stress (He et al., 2002). Negative coping mechanisms involve self-destructive methods to reduce stress such as avoiding friends and family, drinking large quantities of alcohol or using recreational drugs (He et al., 2002).

Additionally, there are two main categories of coping, namely problem-focused coping (or active coping) and emotion-focused coping (passive coping) (Hood & Carruthers, 2002). Problem-focused coping concentrates on finding a solution to the problem at hand and include strategies, such as learning new skills to tackle the problem or changing one's motivation levels (Porter, 2013). The strategies can involve changing internal and/or external factors to mitigate the problem and alter the source of stress (Mashigo, 2010). Emotion-focused coping tends to consider changing emotional responses to the problem, such as avoidance, distraction and acceptance (Porter, 2013). Rice (1999) suggests that the two strategies are not independent of each other, as an individual could be attending to problem-solving, while dealing with emotional pain simultaneously. Due to the type of work that EMS personnel perform, research findings indicate that they tend to be more problem-focused than emotion-focused (Mashigo, 2010). The findings also suggest that factors like experience, training, age, marital status, personal traits, coping styles, resources and strategies have an impact on the coping strategies of emergency service employees (Mashigo, 2010). Ultimately,

according to the findings, with longer service in the sector, resilience will develop over time.

3.7.4. Functional and dysfunctional coping

As mentioned above, not all coping strategies are positive and some coping mechanisms are more beneficial in psychosocial adaptation than others. Scarpa, Haden & Hurley (2006) explored both functional and dysfunctional coping strategies. Active coping strategies seem to have a positive influence on mental health and involve problem-focused coping efforts aimed at changing the situation (e.g. direct action, support seeking) or the view of the situation (e.g. positive reappraisal). Avoidant coping strategies, on the other hand, tend not to have positive outcomes and generally involve efforts of not thinking about the situation or otherwise avoiding it (e.g. denial, substance abuse) (Scarpa et al., 2006).

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A research study by Mashigo (2010) found that EMS personnel use both functional and dysfunctional coping strategies. The findings suggest that with functional coping strategies, social and emotional support stood out as the most beneficial strategy, with family and colleagues being experienced as the most effective coping strategies (Mashigo, 2010). Harrison & Kinner (1998), as cited in Porter (2013), concur that social support, including peer support, and the EMS personnel's capacity to relate to others, play a major role in the way they handle stress after a traumatic event. The findings further suggest that with dysfunctional coping strategies, alcohol and tranquilisers were perceived as helpful, but the participants, who partook, were also aware of its negative effects; thinking about the incident and flashbacks were found unhelpful; loss of emotional control through being aggressive and unpleasant to others was also identified as dysfunctional (Mashigo, 2010). Dysfunctional coping strategies

could lead to burn-out, which refers to emotional and physical exhaustion, resulting from a combination of exposure to environmental and internal stressors, as well as inadequate coping and adaptive skills (Miller, 2003).

Job burn-out among workers in the helping professions may result from them experiencing cumulative on-going work stressors and strains over time (Mashigo, 2010). Burn-out can be associated with less job satisfaction, longer time in service, less recovery time between incidents and more frequent exposure to incidents (Porter, 2013). There is evidence from ambulance workers that even everyday traumas in emergency work take their toll, with a significant number showing above average symptoms of burn-out and PTSD (Luce, Firth-Cozens, Midgly & Burges, 2002). In addition, after experiencing repeated trauma, EMS personnel can be at risk of acute stress disorder, which, in turn, could lead to PTSD (Porter, 2013) that will be further explored in the next section.

3.7.5. Post-traumatic stress disorder in EMS personnel

Literature suggests that post-traumatic stress is a normal response to an extremely challenging event, followed by a normal recovery (Campfield & Hills, 2001). According to research, post-traumatic stress disorder (PTSD) develops when the normal recovery fails and a suffering individual struggles to adjust to the experience, while the acute symptoms continue and intensify (Campfield & Hills, 2001). It is important to be aware of the difference between post-traumatic stress (which is normal, given the traumatic experience) and post-traumatic stress disorder. Post-traumatic stress disorder (PTSD) is unlike post-traumatic stress because it involves exposure to traumatic or stressful events and is characterized by four main clusters of symptoms, namely: intrusion symptoms, persistent avoidance of stimuli, negative alterations in cognition

and mood associated with the traumatic event, and marked alterations in arousal and reactivity (American Psychiatric Association, 2013). Re-experiencing symptoms comprises of: memories or images of the trauma, which reappear unexpectedly; flashbacks of the traumatic incident, which occur when the individual is awake; nightmares of the traumatic incident, which occur when the individual is asleep; psychological or physiological reactivity, when encountering trauma cues (Dekel & Monson, 2010). Avoidance symptoms consist of: avoiding thoughts and activities associated with traumatic experiences; avoiding close emotional ties with family and friends; inability to recall aspects of the traumatic event; reduced interest in life; emotional detachment; and a sense of foreshortened future (Dekel & Monson, 2010). Hyper-arousal symptoms include: sleep disturbance; irritability or anger; difficulty concentrating or remembering current information; hyper-vigilance; and an exaggerated startle response (Dekel & Monson, 2010). PTSD is therefore a frequent problem in occupations that consistently deal with emergencies or traumatic situations.

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Previous research has shown that exposure to traumatic events can have a negative impact on one's psychological and physical well-being, as well as one's relationship with others (Porter, 2013). EMS personnel, as a result of the work they do and the nature of the events to which they are exposed, are particularly vulnerable to the damaging and harmful effects of stress and PTSD. Regehr et al. (2002) conducted a quantitative survey with a sample of 86 paramedics from one organisation in Canada, on stressors encountered as part of their jobs, the effects of stress, organisational supports and strategies for dealing with stress. The findings revealed that all 86 paramedics reported that they had been exposed to at least one critical incident during the course of their career, including the death of a colleague, injury on duty, mass

causalities and the death of a child (Regehr et al., 2002). Interviews with paramedics established that they suffered post-traumatic symptoms, including intrusion symptoms (nightmares and reliving the event) and arousal symptoms (hyper-vigilance and difficulty to concentrate) (Regehr et al., 2002). Other participants described being over-emotional, experiencing shortness in breath, night terrors and flashbacks (Regehr et al., 2002). According to research done by Porter (2013), a high prevalence of PTSD symptoms in ambulance personnel indicates an inability to cope with the daily stress and in order to manage the impacts of this stress, a recommendation is for personnel to take a leave of absence or be transferred to non-emergency duties for the long or short term. Möller (2004, cited in Edwards 2005: 131) also found that nearly a third of emergency services personnel met the criteria for PTSD. Edwards (2005) is, therefore, of the opinion that there is undeniable evidence that traumatic stress symptoms are very real, and that a large number of EMS personnel are affected on a chronic basis, which could have a severe toll on their relationships and occupational life, as only a small percentage of whom receive any form of counselling or professional help.

The stress of emergency service work has more than just an impact on the trauma worker, as research findings have indicated that work stress may impact family functioning.

3.8. Exposure of secondary trauma on the spouses of emergency service personnel

Clinical observations and research have revealed that the consequences of traumatic events are not limited to the persons primarily exposed to the event, as these events often affect significant others in their environment, namely, family, friends or caregivers (Dekel & Monson, 2010). Figley (1989) suggests that secondary traumatization could start with family

or friends' efforts to emotionally support and empathize with their troubled loved ones, in an effort to try and understand their feelings about their experiences. During this process, significant others could internalise the traumatized person's feelings, experiences, as well as memories as their own, which can influence them to embrace similar symptoms (Dekel & Monson, 2010). These symptoms include a variety of post-traumatic manifestations such as headaches, intrusive imagery, avoidant responses, physiological arousal, distressing emotions, heightened sense of vulnerability, functional impairment and emotional numbing (Dekel & Monson, 2010).

Family support does have a reducing influence on the effects of the highly stressful work of emergency service personnel, yet spouses are not immune to the trauma and stress their partners face (Regehr, 2005). Regehr (2005) explored the impact of trauma exposure on spouses of paramedics and found that discussing their work with family does have detrimental effects on the paramedics and their partners. King, Mar & De Longis (2014) conducted a more recent study on stress and coping across occupational and personal environments (SCOPE) with Canadian paramedics and their spouses and found that work-related stress, burnout, and exposure to human suffering and tragedy reported by EMS personnel on a regular basis was also associated with increased stress for spouses at home (following the paramedic's work day). This suggests that work stress and possible secondary trauma can transfer across settings, as well as between individuals (King et al., 2014). In the study by Kind et al (2014) burnout was also associated with increased marital tension, and conflict was reported by both EMS personnel and their spouses on a regular basis (King et al., 2014).

3.9. Impact of emergency work on the marital relationship

Research has established that stress is contagious across roles, particularly from the work setting to the home setting, and vice-versa, meaning that stress experienced at work can transfer to the home, and stress experienced at home can transfer to work (King et al., 2014). This process is known as *spill-over*. In addition, stress experienced at work can transfer to the spouse in the home setting, a process known as cross-over (King et al., 2014). Interviews conducted by Regehr (2005) implied that cross-over is prevalent among the spouses of EMS personnel, particularly when traumatic calls at work appear to lead to heightened stress experienced by all the immediate family members in the home. The findings also suggest that job stress could reduce the quality of marital interactions and influence the other spouses to feel negatively toward the relationship (Regehr, 2005). It has been determined that certain skills required for emergency work may not be consistent with those required to be a good spouse or parent. These skills include jumping in to action, taking control of situations, making quick and vital decisions, remaining detached, as well as questioning certain things (Regehr, 2005). Research by Dekel & Monson (2010) has found that partners of EMS personnel have indicated that their spouses often display symptoms consistent with PTSD such as withdrawal, nightmares, chronic sleep deprivation and avoidance. The partners also stated that the EMS personnel returned home moody, closed off (emotionally), or emotionally distant, which left a tremendous impact on the family (Dekel & Monson, 2010).

The emotional consequences of the traumatic incidents experienced by emergency service personnel spill over to their spouses and children, and there is evidence that PTSD symptoms are associated with poorer family functioning (Dekel & Monson, 2010). This is consistent with Bowen's (1950) Family Systems theory, discussed in the previous chapter, which postulates that every family member is connected to each other through a system of

overlapping and intertwining relationships, therefore, one of the family member's exposure to trauma on a regular basis could have a negative influence on the family system as a whole (Bowen, 1950, cited in Becvar & Becvar, 2006).

It is clear that the nature of the work, involving a high percentage of time spent responding to traumatic incidents, can be debilitating for EMS personnel and their family system. Many emergency organisations have implemented counselling, training and stress management programmes for their staff (Robinson, 2002); however, still more needs to be done to assist EMS personnel and their families.

3.10. Conclusion

This chapter unpacked the concepts of trauma, secondary trauma, stress, coping and post-traumatic stress disorder, as well as the effects these have on EMS personnel and their spouses. Research has revealed that EMS personnel are exposed to events involving trauma, suffering and pain on a daily basis, which consequently leads to stress, secondary trauma, burn out and PTSD. This chapter further explored how emergency work can influence behaviour changes in EMS personnel, as well as the different coping mechanisms used in order to cope with the stressors of emergency work. Coping is divided into two categories: problem-focused coping, which actively seeks solutions to problems, or emotion-focused coping, which seeks to manage the problem situation, especially when helplessness is the outcome. Functional and dysfunctional coping were also discussed and it was determined that EMS personnel made use both coping styles.

Literature also revealed that the images and feelings associated with exposure to traumatic situations on a regular basis, are not limited to the emergency service personnel, who are

primarily exposed to the event, but also affect the significant others in their environment such as their spouses. The impact of secondary trauma on the spouses and their marital relationships was also explored, revealing that emergency work could have a severe impact on spouses, as well as family functioning. This study was conducted according to Bowen's (1950) Family Systems theory, which views the family as a dynamic system, in which interrelationships of family members create a whole, and the family system influences, and is influenced by, its members. The following chapter discusses the research methodology in detail.



CHAPTER FOUR

RESEARCH METHODOLOGY

4.1. Introduction

This chapter will describe the research methodology as applied during the research study, following a brief overview in Chapter One. The rationale of the study will firstly be explored briefly. Thereafter, the selected research approach, research design, population and sampling, data collection, data analysis, ethics considerations, as well as trustworthiness and how they were negotiated throughout the research process, will be discussed in detail.

4.2. Rationale of the study

This research study aims to explore and describe the experiences of secondary trauma among UNIVERSITY of the the spouses of Emergency Medical Services (EMS) personnel. Based on the literature outlined in the previous chapter, it is apparent that EMS personnel are exposed to traumatic incidents on a regular basis and are, therefore, at a higher risk of developing secondary traumatic stress or post-traumatic stress disorder. Spouses and children of EMS personnel could exhibit the same emotional, behavioural and physiological symptoms that the EMS worker may present with, and are, therefore, also at risk of experiencing secondary trauma, without actually being directly exposed to the trauma. Despite this acknowledgement, compared to studies on the direct victims of trauma, little attention has been paid to the spouses of those, who work with the traumatized victims, particularly the spouses of EMS personnel. The current study aims to make a contribution to the field of secondary trauma by exploring the effects of secondary trauma on the spouses of EMS personnel.

4.3. Research design

A research design is used to structure a research study and communicate how all of the major components of the research study work together to address the central research question/s. These components include the samples or groups, measures, treatments or programmes, as well as methods of assignment (William, 2006). This research study focused on using a descriptive and explorative design to qualitative research.

Exploratory research is conducted in order to gain insight into a situation, phenomenon, individual or community (Stebbins, 2001). The aim of exploratory research is to employ an open, flexible and inductive approach to discover new insights into different phenomena (Terre Blanche, Durrheim & Painter, 2006). Exploratory research attempts to find out 'what' is transpiring in a particular field or area, and the 'what' question provides an understanding of occurrences, persons or situations (Mouton, 2011, cited in De Vos et al., 2011). Through explorative design the researcher sought to explore the secondary trauma experiences of the spouses of emergency services personnel. This research also incorporates a descriptive design, which provides a richer meaning that aims to give a more accurate account of exactly what the participants experience in their daily lives and presents a picture of the specific details of a situation, social setting or relationship (Rubin & Babbie, 2001). Descriptive design aims to describe phenomena accurately, either through narrative-type descriptions, classification or measuring relationships (Terre Blanche et al., 2006).

4.4. Research approach

The researcher implemented a qualitative research approach in this study, which focused on in-depth descriptions and understandings of the secondary trauma experiences among the spouses of emergency services personnel. As mentioned previously, qualitative research

involves the analysis of any unstructured material, including naturalistic observations and subjective experiences, which are obtained through comprehensive interviews, content analysis, ethnography, assessment and semiotics (Rughoo, 2010). The qualitative research approach allowed the researcher to gain insight into the participants' attitudes, behaviours, value systems, experiences, motivations, culture and lifestyle. It also allowed the researcher to explore and understand the meaning ascribed to social and human problems (Creswell, 2009). Qualitative research allowed the researcher to collect data in the form of written and unspoken language, and do analyses of the data through identifying and categorising of themes (Terre Blanche et al., 2006). This research approach also permitted the researcher to study selected issues in depth to identify and attempt to understand the categories of information from the data (Terre Blanche et al., 2006).

There are certain benefits to using qualitative research which contribute to insightful results, such as: the dynamic nature of the interview process helps to engage participants more actively than in a more structured survey; issues can be examined in detail; the opportunity to probe helps the researcher to grasp beyond initial responses and rationales; the opportunity to observe, record and interpret non-verbal communication, as part of a participant's feedback, is valuable during interviews and analysis (Qualitative Research Consultants Association, 2015). The approach is aimed at providing detailed and in-depth descriptions of the experiences of the participants, as well as the meaning behind these experiences (Babbie & Mouton, 2003).

4.5. Research Question

The role of the research question in qualitative research serves to narrow the purpose of the research; it determines where and what kind of research the researcher will be investigating,

and identifies the specific objectives the study will address (Creswell & Clark, 2004). The research question for this study was:

• What are spouses' experiences of secondary trauma among emergency service personnel?

4.6. Aim and objectives

Aim:

The aim was to explore and describe spouses' experiences of secondary trauma among emergency services personnel.

Objectives:

The objectives were to:

- explore and describe spouses' experiences of personal, behavioural and emotional changes in emergency service personnel.
- explore and describe spouses' experiences of personal, behavioural and emotional changes in themselves.
- explore and describe the influence of secondary trauma on the relationship of emergency service personnel and their spouses.
- explore and describe the coping mechanisms of the spouses of emergency service personnel.

4.7. Research Methodology

Research methodology specifies how researchers practically approach the research subject that they believe can be known or determined (Terre Blanche et al., 2006). This section

explores the research study's methodology-related issues such as: population and sampling; data collection; data analysis; data verification; and, the ethical considerations applied to this study. The researcher adopted an interpretive approach that aims to explain the subjective reasons and meanings behind social action, by using methodologies such as interviewing and participant observation (Terre Blanche et al., 2006).

4.7.1. Population and sampling

The *population* of a study refers to the subjects, persons, events, or organisations that pose the attributes that the researcher is interested in, are relevant to the research problem and encompasses all the elements that make up the unit of analysis (De Vos, Strydom, Fouche & Delport, 2002). It is the larger pool from which the sampling elements are drawn, and to which the research findings are generalised (Terre Blanche et al., 2006). Emergency services in South Africa assist a wide community in the Gauteng area, and, therefore, for the purpose of this study the population entailed different emergency service organisations in Gauteng, such as ER24, Netcare911 and Hatzolah Emergency Services.

Sampling is a procedure used by the researcher to select participants for the study that represent the population (Babbie & Mouton, 2003). The selection of the participants was purposive, as purposive sampling is used in qualitative research to select cases that can purposefully shed light on the research problem (Creswell, 2007). Purposive sampling is a type of non-probability sampling, in which the researcher selects a particular sample, which is relevant to the purpose of the study, based solely on the judgement of the researcher (Rubin & Babbie, 2008). The researcher approached two private emergency service companies, ER24 and Netcare911, as well as one non-profit emergency service company, Hatzolah Emergency Services, for permission to recruit 8

spouses of EMS personnel as participants for this exploratory study. Three (3) spouses were recruited from ER24, three (3) spouses from Netcare911, and two (2) spouses from Hatzolah Emergency Services. In each case, the researcher approached the EMS staff member first for permission to contact their spouses.

The following criteria were used for selecting participants for the study:

- the spouse was required to be in a relationship with an EMS personnel member, who had been working for the emergency service company for a minimum of two years;
- the spouse was required to be in a relationship with an EMS personnel member, who worked in a position where s/he is exposed to trauma on a regular basis;
- the spouse was required to be married, or cohabiting with, the EMS personnel member for a minimum of two years;
- the spouses were required to be conversant in English.

Permission was granted from each organisation to recruit some of their personnel, who were eligible for the study. The researcher also ensured that informed consent was obtained prior to data collection.

4.7.2. Research instrument

A research instrument is a testing device to measure a given phenomenon. In this study the research instrument used was the researcher, who interviewed, observed and recorded human behaviour of spouses of EMS personnel (Terre Blanche, et al., 2006). The researcher developed an interview guide in advance, based on literature about emergency services, secondary trauma, behavioural changes, coping mechanisms and

social support, which would be utilized to probe for certain experiences and feelings from the participants. Biographical information was included in the interview guide to accommodate the cultural diversity of our country, level of education, experience and specific qualification in emergency service work. The interview guide's questions were formulated as open-ended questions. Variables to be responded to included: exposure to traumatic incidents, impact on the marital relationship, behavioural changes in the EMS personnel and spouses, coping mechanisms, as well as social support.

4.8. Data collection

Data is the basic material that researchers work with and it can be obtained from observation in the form of numbers (quantitative data) or language (qualitative data) (Terre Blanche et al., 2006). In qualitative research, the researcher is viewed as the instrument of observation and data is collected either by interviews, observing or recording human behaviours in the contexts of interaction (Terre Blanche et al., 2006). For the interview guide non-directional open-ended questions were formulated with sub-questions, which addressed the major concerns and perplexities to be explored around secondary trauma and the spouses' experiences of secondary trauma (Creswell, 1998). The respondents, therefore, were free to formulate their own responses (Marlow & Boone, 2005). To gather information, all questions asked were open-ended and presented as part of a semi-structured interview. This type of interview, allowed participants to describe their own behaviour and state of mind, and was instrumental in gaining substantial information on the topic. Relevant data was gathered from the eight participants, or until data saturation was reached (De Vos et al., 2011). Interviews followed a set, semi-structured interview guide, as this served as a guideline for relevant topics that needed to be addressed (Rubin & Babbie, 2008).

4.8.1. Pilot study

A pilot study was arranged to review the shortcomings and trustworthiness of the interview guide, and to make adjustments, where necessary, before the main data collection took place (De Vos et al., 2011). A pilot study is a preliminary study on a small sample that helps to identify any potential problems with the research design, as well as the research instruments (Terre Blanche et al., 2006). The pilot study was conducted on the first participant, who volunteered to participate in the study, and took place in a private room at the participant's office. The actual interview schedule was used and the data was analysed for any gaps, inconsistencies, or flaws in the data collection process (Terre Blanche et al., 2006).

At the end of the pilot interview, the researcher asked the participant to comment on any of the questions asked, as well as the manner in which they were asked. The participant was happy with the questions asked, felt that the manner in which they were asked was appropriate, and understood the purpose of the study after completing the interview process. Once the pilot interview was conducted, the researcher again ensured that no offensive language was contained in the questions asked and that the instructions and layout were clear. The researcher also checked the administrative time, that there was data input and did a preliminary data analysis (Terre Blanche et al., 2006).

4.8.2. Preparation of participants

Following the guidelines of De Vos et al. (2011) before commencement of each interview session, the researcher ensured that the participants were fully prepared for the interviews. Consideration was given to the participants' schedules and availability,

when setting up appointments. The interviews were conducted in a private space and the venue was the participants' choice, to ensure familiar surroundings, so that they could feel relaxed and comfortable during the interviews. Furthermore, the researcher guided each participant through the principles of ethical considerations, explaining their rights to confidentiality, anonymity, withdrawal from the study at any time, voluntary participation and debriefing in case the interview led to any emotional distress. This information helped to put the participants at ease to make informed decisions. Permission to audiotape the session was also acquired, to assist in maintaining a comprehensive record of the interviews without the distraction of detailed note-keeping, as well as to demonstrate to the interviewee that the information they were providing was considered to be serious (Terre Blanche et al., 2006).

4.8.3. Course of the interviews

The interviews lasted approximately 45-60 minutes and were conducted in English. The participants did most of the talking, but the researcher gave direction in the interview, when specific topics, raised by the participants, were further explored. The language use was important, and caution was applied not to put the participants under pressure (Babbie & Mouton, 2001). The researcher asked open ended questions, which did not presume an answer and allowed detailed responses. At times, the researcher asked the participant to elaborate further, in order to hear more on the particular subject (Terre Blanche et al., 2006). The semi-structured interview guide ensured standardization in the broad areas explored, but also allowed the interviewer to pursue unexpected and unique avenues that were important to some participants (Creswell, 2003). Throughout the interview, the researcher aimed to have a conversation with the participant, so that it did not become a question and answer session. The researcher took care to convey empathetic understanding of the clients' situations through active listening skills, which

included summarising and paraphrasing some of the participants' statements. Field notes were taken, as well as process notes, in which the researcher recorded non-verbal cues and body language that may not have been obvious when listening to the audio tape (Terre Blanche et al., 2006). The data was also transcribed verbatim, and the consent forms, as well as transcriptions were held in a safe place.

4.9. Data Analysis

The aim of data analysis is to transform information or data into an answer to the original research question (Terre Blanche et al., 2006). Data analysis is the process of systematically applying statistical or logical techniques to describe, illustrate, summarize, outline, and evaluate data (Shamoo & Resnik, 2003). The form of data analysis used is determined by the specific qualitative approach taken (field study, ethnography content analysis, oral history, biography, unobtrusive research), as well as the form of the data (field notes, documents, audiotape, videotape) (Shamoo & Resnik, 2003).

According to Creswell (2009) data analysis should be conducted in steps starting with the specific and moving on to the general. For the purpose of this study, the researcher utilized these steps to analyse the data, as follows:

- **Firstly,** the data collected was organised and prepared so as to get a sense of the whole. This involved reading through the transcriptions carefully, transcribing and scanning the notes made during the interview, writing down any ideas that came to mind, sorting through and arranging the data.
- **Secondly,** you need to read through all the transcripts to get a thorough feel of the data obtained, which helped determine the general meaning and tone being conveyed by the participants.

- The **third** step involved coding, which allowed the researcher to organise the data into smaller more understandable parts, clustering similar topics together.
- During step **four**, the coding process allowed the researcher to create descriptions and themes that described the phenomena studied, and helped to build a more complex analysis, by elaborating on the themes and topics that emerged.
- In step **five**, the topics were categorised using the most suitable, descriptive words and the researcher conveyed, in written narrative, the findings of the analysis.
- In the **sixth** step, the researcher abbreviated each theme and the codes were assigned alphabetic numbers or roman numerals.
- During the **seventh** step, the information for each category was arranged and a preliminary analysis done.
- At the **final step**, recoding was done and the researcher assigned meaning to the data obtained through interpretation of the data and describing what had been learned.

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4.10. Data verification and Trustworthiness

During the data verification process, the data is checked for accuracy, as well as inconsistencies, and refers to the devices used during the process of research, to incrementally contribute to ensuring reliability and validity of the collected data (De Vos et al., 2011). There are four criteria for ensuring data verification, namely: credibility, transferability, dependability and conformability, observed as the main criteria in upholding the legitimacy and neutrality of a study's findings (Nueman, 2006)

• **Credibility** refers to confidence in the truth regarding the data and seeks to answer the question of how compatible the findings are with reality (Babbie, 2010). In order to ensure data credibility, each participant was informed that the interview was a voluntary process and was given the opportunity to refuse to participate in the study,

in order to guarantee that the data collection sessions only involved participants, who were willing to take part, and prepared to offer data freely. The participants were also encouraged to be honest from the outset of each session, with the researcher aiming to establish a connection in the beginning and indicating that there were no right answers to the questions, in order to truly represent the participants' realities.

- Transferability refers to the principle that other researchers can apply the findings of the study to their own (Babbie, 2010). It is also the extent to which the knowledge and findings generated can be generalised to similar contexts (Ross, 2010). To prove that the data gathered was transferable to similar contexts, the researcher ensured that different participants were used, so as to gain a broader perspective of the experiences of secondary trauma among the spouses of EMS personnel.
- Dependability refers to the degree to which the reader can be convinced that the findings are indeed what the researcher claims (Ross, 2010). It also relates to stability after taking into account contextual differences (D'Cruz & Jones, 2004). The researcher ensured using the same interview schedule, research approach and methodology when working with the various participants. The research tool was designed in such a way that it elicited as much as possible regarding the experiences of secondary trauma among the participants in the study. Therefore, the researcher is of the opinion that another researcher is likely to arrive at similar findings as the present study. The researcher also made use of an independent coder to enhance dependability.
- Conformability is the ability of the researcher to use reflexivity to identify his/her own personal and social positioning, as well as power issues in research (D'Cruz & Jones, 2004). By taking into account the ethical considerations, the researcher ensured that the data collected was confirmable. Even though it is difficult to be objective and

to totally remove self from the research, the researcher consulted the participants regarding the information they had provided to establish whether the inferences, assumptions and conclusions drawn in the data analysis and coding, had their intended meanings, as interpreted by the researcher. A pilot study was also conducted and by comparing the results of the pilot, and the present study, the results deemed to be fairly objective, in that responses to similar questions by the participants were very similar, although sometimes worded slightly differently.

It is also important for researchers to evaluate the **Trustworthiness** of qualitative research. Krefting (1991) proposes the use of Guba's (1985) model for assessing the truth value of such studies. In striving toward trustworthiness, the researcher focused on four concepts described by the Guba model, namely:

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- truth value;
- applicability;
- consistency; and
- neutrality

(Krefting, 1991).

The researcher applied **truth value** by ensuring that only the original information shared by the participants was used, and that all data was a true reflection of the participants' lived and perceived experiences. The researcher ensured that her own interpretations, understandings and personal experiences did not influence the information received from the participants.

Applicability refers to the degree in which the findings can be applied to other contexts and achieved by providing enough rich data for comparisons to be made with the findings of existing or future studies (Krefting, 1991). By ensuring applicability, the researcher was

confident that similar results would be obtained if research of the same nature was conducted in another context, using the same interview guide (Krefting, 1991).

Consistency of data entails "whether the findings would be consistent if the enquiry was replicated with the same subjects or in a similar context" (Krefting, 1991: 2). Coding and recoding during the analysis phase enhanced consistency. The researcher obtained consistency by ensuring that any variability in replicating the research could be tracked to identifiable sources, using the same sampling procedure.

The **neutrality** of the study was ensured by remaining free from bias, focused on learning from the participants' lived experiences and not trying to control or manipulate them (Krefting, 1991). The data was analysed independently by an independent coder to ensure neutrality.

4.11. Ethics Considerations

Ethics is an important concept for all studies as it protects the participants, the institution that allowed the research to be conducted, and the researcher/s involved. Given the sensitive nature of the study and the involvement of human participants, the researcher was required to gain ethical approval from the University, as well as from the Emergency service organisations. According to Babbie (2010), researchers must take all the essential precautions to ensure that the participants in a study are neither emotionally, nor physically, harmed by the research process. The research should be ethically sound in order to protect the participants from any physical or psychological harm, and participants should be treated with respect and dignity (Neuman, 2006).

Permission to conduct the study was obtained from the UWC Ethics Committee for ethical clearance, from Senate Higher Degrees Committee, as well as from the different emergency

service companies where the data collection took place. Participants were given a subject information sheet, which gave them a brief introduction to the study and informed them of their rights as a participant. De Vos et al. (2002) emphasise the importance of providing accurate and sufficient information to participants, to allow them to make a voluntary decision about participating in the study. The participants were fully informed of all aspects of the study before being required to sign informed consent to their participation. They were also advised of their right to choose not to participate in the study, to withdraw from the study at any time, without any negative consequences and the right to omit any questions they did not want to answer. Informed consent was obtained from all the participants to ensure quality and integrity. Cognisance was given to any physical or emotional harm that could result from the study. Information that might harm the participants' employment or embarrass them was not disclosed and will remain confidential (Babbie, 2010).

Deception was avoided at all costs and the participants were not misled in any way. This implies that no information was withheld from the participants, neither was incorrect information supplied to coerce participation in the study (De Vos et al., 2002). Personal privacy was respected at all times. The researcher obtained permission from the participants to audiotape the interviews and to make field notes. In maintaining anonymity, the participants were protected, as their identities were not publically disclosed and the researcher also used pseudonyms to protect their confidentiality.

Debriefing constitutes an imperative part of the research process, as it provides the participants with the chance to work through their experience and address any negative feelings that might have surfaced during their participation in the study (De Vos et al., 2002). Those participants, who needed debriefing, were referred to a social worker based at an

employee wellness company, called ICAS (Independent Counselling Advisory Services), which was arranged by the researcher and remains confidential.

The researcher is also bound by, and adhered to, the Social Work Code of Ethics (SACSP), implementing some of the social work practices' respect for person principles of non-judgmental attitude, self-determination and non-discriminatory attitudes towards the participants.

4.12. Limitations of the study

Limitations can be viewed as restrictions that hinder progress and are inevitable to any study; however, what is important is the manner in which the researcher addresses each limitation (De Vos et al., 2011). The researcher experienced a number of challenges during the process of enrolling participants and data collection, as follows:

- Since this is a descriptive and exploratory study, it is important to note that most of the information is based on the participants' subjective experiences. This experience provided the foundation for exploring different narratives in a similar environment. Caution must be exercised when generalizing the findings of other groups, in different organizations, therefore the experiences narrated in this study are unique to each individual.
- The researcher experienced some difficulties in acquiring participants for this study,
 probably due to the sensitivity and stigma attached to the subject of trauma and
 secondary trauma; therefore, some potential participants hesitated to participate.
- Cultural diversity tended to be a problem, as only white Caucasian participants were willing to participate in the study. Two African participants were originally willing to

participate, but did not return to set up the interviews. Due to the diverse cultures in South Africa, the findings of this study cannot be generalised to a specific culture, due to the subjective reporting by participants of their experiences.

4.13. Conclusion

In this chapter the researcher clarified the aim and purpose of this study and outlined the research question. The researcher continued to provide the research design, the sample of the study, measuring instruments used, the procedure and ethical considerations that were employed. The limitations of the study were also discussed, such as limited accessibility of research participants and cultural barriers during the course of the data collection, however, the researcher was able to successfully access participants, who met the selection criteria and managed to interview eight (8) spouses until data saturation occurred.

In the next chapter the research findings will be discussed.

CHAPTER FIVE

RESULTS AND DISCUSSION

5.1. Introduction

The aim of this chapter is to discuss the findings that emerged from the data analysis. The relevant demographic data of the interviewed spouses will be presented and discussed. The researcher has followed the common practice in qualitative research of presenting sufficient data, in the form of participants' remarks, to 'place real-life events and phenomena into some kind of perspective' (Terre Blanche, Durrheim & Painter, 2006: 321), as well as to effectively and persuasively support the findings of the study. Through data analysis, the findings are described according to different themes and sub-themes, which will be explored in this chapter, as well as the overall results and findings.

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5.2. Demographic data of participants

As mentioned in the previous chapter, the participants were recruited from different emergency service companies in Gauteng, namely ER24, Netcare911 and Hatzolah Emergency Services, by means of purposive sampling. Firstly, the demographic data of the eight participants is presented in Table 5.1: and discussed in the paragraphs that follow.

Table 5.1: Demographic details of each participant

Participant	Gender	Age	Ethnicity	Language	Marital status	Duration of cohabitation	Spouse's duration in EMS field
1	F	20	White	English	Engaged	2.5 years	2 years
2	М	28	White	English	Married	4 years	3 years
3	М	32	White	English	Married	6 years	5 years

4	F	45	White	Afrikaans	Married	20 years	10 years
5	F	27	White	English	Married	2 years	2 years
6	М	40	White	Afrikaans	Married	15 years	9 years
7	F	30	White	English	Married	3 years	4 years
8	F	34	White	English	Married	9 years	6 years

5.2.1. Age

The age of the participants ranged from 20-45 years. The ages of three participants were between 20-30 years; another three, between 30-40 years; and two, between 40-50 years.

5.2.2. Gender

The demographic data illustrated that five (5) of the eight (8) participants were female and three were male. It was more difficult to find male participants, as males tend to make up a greater percentage of emergency services personnel, due to the nature of their duties, as well as the physical nature of their profession (Satterwhite, 2013).

5.2.3. Ethnic group

The interviewed group comprised of eight (8) White or Caucasian individuals. The researcher was challenged to access different ethnic groups to represent the South African populations demographic. Two (2) Black African females agreed to participate in the research but failed to respond when the researcher tried to set up the interviews.

5.2.4. Language

All of the participants were conversant in English, although two of them were predominantly Afrikaans-speaking. However, as the researcher is only conversant in English, all the interviews were conducted in English.

5.2.5. Marital status

Seven participants indicated that they were married and one was engaged.

5.2.6. Duration of cohabitation

The majority of the participants' cohabiting relationships ranged between two and six years, at the time of the study, while one had been in the same cohabiting relationship for 20 years.

5.2.7. Spouse's duration in EMS

Two of the participants' spouses had been working in the EMS profession for 9 years or more, and the other participants' spouses had 2-6 years' experience in the EMS profession. Literature reveals that the health sector workforce experiences significant low levels of job satisfaction due to the working conditions, physical security and remuneration (Harrison, 2010). This is one reason for the constant loss of EMS personnel, and other health professionals, to overseas organisations (Harrison, 2010). Three participants spouses' had been in the EMS field for 6 years or more, which somewhat refutes the above literature assertions, however, job satisfaction is dependent on the context and the organisation that employ the EMS personnel.

5.3. Presentation of the findings

To report on the research findings, the researcher provides transcribed quotations from the interviews to support the spouses' experiences of secondary trauma. The content of the quotations acts as a guide to the results that arose from the data. Meaning was assigned to the data through interpretation of the data and the credibility of the themes was established by ensuring that the illustrative quotations reflected the participants' experiences, meanings and

feelings (Creswell, 2009). To substantiate the themes and sub-themes, the researcher's interpretations and analysis are integrated with the literature.

The collected data from the semi-structured individual interviews, the field notes, recordings, the processes of data analysis by the researcher and the independent coder, resulted in seven themes, supported by sub-themes, which are presented in Table 5.2.

Table 5.2: Major Themes and sub-themes

Themes	Sub-themes				
Theme 1: Traumatic incidents at work					
	Sub-theme 2.1: EMS personnel discuss the traumatic incidents they are exposed to at work				
Theme 2: Impact of secondary trauma on marital relationship	Sub-theme 2.2: Secondary trauma has an impact on the relationship				
	Sub-theme 2.3: Secondary trauma has an impact on the spouse of the EMS personnel				
The same On Deck and a same laboratory	Sub-theme 3.1: Behavioural changes in their spouse				
Theme 3: Behavioural changes	Sub-theme 3.2: Behavioural changes in themselves				
Theme 4: Impact of emergency	Sub-theme 4.1: Negative impact of emergency service work on marital relationship				
service work on marital relationship	Sub-theme 4.2: Positive impact of emergency service work on marital relationship				
Theme 5: Social Support					
	Sub-theme 6.1: Current coping mechanisms				
Theme 6: Coping mechanisms	Sub-theme 6.2: Relationship coping strategies				
Theme 7: Support for EMS personnel and spouses					

5.4. Discussion of the findings

This section discusses the different themes and their accompanying sub-themes, supported by direct quotations from the spouses of EMS personnel. The identified themes, sub-themes and quotations from the interviews will be compared and linked to existing literature.

5.4.1. Theme 1: Traumatic incidents at work

In South Africa, the term paramedic is used as a title for all emergency medical services (EMS) personnel, employed by a variety of different organisations. The nature of their duties include the provision of out-of-hospital acute medical care, as well as transport to definitive care for patients suffering from illnesses, injuries and trauma (Iwu, 2013). EMS personnel, especially South African EMS personnel, are exposed to various traumatic incidents, such as motor vehicle accidents, motorcycle accidents, victims of sexual assault, hijackings, armed robberies, suicides, shootings, domestic violence, as well as individual's suffering from illnesses or chronic diseases (Edwards, 2005).

Literature reveals that it is possible for an individual to be traumatised indirectly by witnessing unexpected or violent incidents, serious harm, threat of death, or injury experienced by another person; this is known as secondary trauma (American Psychiatric Association, 2000). In order to establish whether EMS personnel experience secondary trauma, the participants in this study were asked how often their spouses were exposed to traumatic incidents at work. All eight of the participants expressed that their spouses were exposed to traumatic incidents every time s/he is at work. One of the participants stated that:

"My husband is exposed to traumatic incidents all the time; I always say drive safe or be safe before every shift." (Participant 4)

Another participant said that his spouse is:

"... exposed to trauma every day that she works." (Participant 1)

The above responses confirm that EMS personnel are regularly exposed to traumatic incidents. According to literature, many emergency personnel suffer from secondary

trauma, as well as high occupational stress, due to witnessing trauma or death on a regular basis (Mildenhall, 2012). Roth, Reed & Zurbuch (2008: 158) state that EMS providers are placed in high stress situations on a daily basis and work in a variety of environments, including all types of terrain and weather (rain, heat, cold, wind and ice). EMS providers could also be exposed to violent patients or aggressive bystanders at a scene of some trauma. One of the participant's responses supports the above, stating:

"My husband deals with traumatic incidents every time he is on shift; sometimes these incidences are worse than others, and there have been a few patients that have been aggressive or forceful when he is trying to help them. He is then sometimes agitated when he comes home or really tired." (Participant 7)

This response indicates that EMS personnel experience frequent exposure to traumatic incidents, which may lead to the risk of developing secondary trauma, post-traumatic stress symptoms, and even, post-traumatic stress disorder (Porter, 2008). It also indicates that, as was discussed in Chapter Three, the consequences of traumatic events are not limited to the persons primarily exposed to the event, as these events often affect significant others in their environment, namely, family, friends or caregivers (Dekel & Monson, 2010). This is in accordance with the Family Systems theory because if one family member is experiencing challenges, such as secondary trauma, other family members, and the system as a whole, could be impacted (Bowen, 1950, cited in Gurman & Kniskern, 2013).

According to literature, it is also not uncommon for EMS personnel to experience post-traumatic stress, which is a normal reaction to an extremely challenging event; however, this is usually followed by a normal recovery (Campfield & Hills, 2001). When that 'normal recovery' fails and a suffering individual struggles to assimilate the

experience, allowing the acute symptoms to persist and intensify, then this can develop into post-traumatic stress disorder (Campfield & Hills, 2001). It has been established that an accumulation of stressful and traumatic incidents can lead to mental health problems, rather than just one specific trigger (Kail, 2014).

5.4.2. Theme 2: Impact of secondary trauma on a marital relationship

During the data analysis, a major theme, *Impact of secondary trauma on a marital relationship*, was identified and further dissected into three sub-themes. The organisation of these themes is presented in Table 5.3. The section following Table 5.3., firstly discusses the relevance of the overarching category, and then focuses on each of the sub-themes.

Table 5.3: Major Theme and sub-themes relating to impact of secondary trauma on marital relationship

Major over-arching theme	Sub-themes		
	Sub-theme 2.1: EMS personnel discuss the traumatic incidents they are exposed to at work		
Impact of secondary trauma on marital relationship	Sub-theme 2.2: Secondary trauma has an impact on the marital relationship		
	Sub-theme 2.3: Secondary trauma has an impact on the spouse of the EMS personnel		

Secondary traumatic stress, also known as 'vicarious' trauma, is a stress response that can occur as a result of knowing, or helping, a traumatised or suffering person (Huggard, 2003). Secondary trauma can refer to the traumatic impact on individuals, who feel the intensity of the traumatic event through another person, even though they did not experience the event themselves (Figley, 2002). This can also be viewed through the ecological model of trauma by Dutton & Rubinstein (1995), discussed in detail in Chapter Two. According to Dutton & Rubinstein (1995) there are a range of reactions that EMS personnel may experience due to their work with victims of trauma.

These include: indicators of psychological distress; shifts in assumptions and beliefs about the world; and relational disturbances. Dutton & Rubinstein's (1995) theoretical model has four components that can influence the development of secondary trauma: (1) the traumatic event to which the EMS personnel are exposed; (2) their coping strategies; (3) their post-traumatic stress reactions; and (4) their personal and environmental factors.

Due to the frequency of traumatic incidents that EMS personnel are exposed to, participants were asked how the traumatic incidents that their spouses witness on duty may have an impact on their spouses and their relationship. This theme is in line with one of the objectives of the study, namely, to explore and describe the influence of secondary trauma on the relationship of emergency service personnel and their spouses. These questions yielded three sub-themes, which are described below.

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5.4.2.1. Sub-theme 2.1: EMS personnel discuss the traumatic incidents they are exposed to on duty

A study by Kail (2014) found that some EMS personnel choose not to talk about traumatic experiences with their families or partners, preferring to 'protect' them, while denying themselves an outlet to process their experiences and, therefore, appearing 'closed off' to their partners. Some EMS personnel, however, are more open about their experiences, which create emotional burden for the partners and family, causing strain and possible secondary trauma (Kail, 2014).

Six participants expressed that their spouses discussed the traumatic incidents, they were exposed to on duty, with them, which, on the one hand, could be viewed in a positive way, because it demonstrates open communication, but, on

the other hand, could also impact their relationships, if the content and description of the incidents were disturbing to their spouses (Kail, 2014). One participant stated that:

"My wife does discuss some calls that she attends to because I think it helps her to debrief but I can see there are times when she wants to talk more about work but may feel like it will burden me or cause me to worry about her" (Participant 2)

An example of open communication is seen in the following quotation as one participant worked in the EMS field, as well, and found it very helpful when his spouse shared her experiences of incidents on duty. He said:

"We both work in the EMS field and we thus talk to each other about incidents we may experience and this helps bring us closer because as we understand what the other person may be feeling" (Participant 6)

Two participants expressed that their spouses do talk, but have become more closed off lately, and shared less than they used to, appearing to be repressing their emotions. The following quotations refer:

"Yes, he used to talk a lot in the beginning, but seems to talk less about incidents that he's exposed to. I think it's because he is worried that he will traumatise me." (Participant 5)

"My husband is very closed off; if I push, then he will talk about work, but otherwise, he is closed off. I have to ask him 'what type of calls did you attend to today; what happened; and ask him questions" (Participant 8)

These quotations depict that some EMS personnel may become more closed off, or repress their emotions, in an effort to avoid thinking about the trauma they had

witnessed and find it easier to block it out. EMS personnel may be concerned that what they share would traumatise their spouses and, therefore, refrain from disclosing information about these incidents. On the other hand, repressing emotions and pushing others away, is a defence mechanism that EMS personnel may use to avoid thinking about, and re-living, the trauma. Repression is an involuntary attempt to keep traumatic events, intolerable impulses or unacceptable ideas from reaching conscious awareness (Sanders, McKenna, Lewis & Quick, 2012). Repression is a result of an approach-avoidance conflict of recalling or thinking about an incident, then trying to avoid thinking about it, because it raises fear or uncomfortable emotions (Sanders et al., 2012). The next sub-theme focuses on how discussing these experiences of secondary trauma can have an impact on the marital relationship.

5.4.2.2. Sub-theme 2.2: Secondary trauma has an impact on the marital relationship

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Due to the close, emotionally intense nature of marital relationships, spouses are usually at high risk of secondary trauma effects (Klarić, Kvesić, Mandić, Petrov & Frančišković, 2013). In contrast to the direct experience of trauma, secondary traumatic stress results from the spouse's need to make sense of, and emotionally connect with, their spouse, who had experienced the trauma (Klarić et al., 2013).

When EMS personnel refrain from sharing their experiences of traumatic events with their spouses, and instead appear to be moody and unpredictable, this behaviour could have a negative impact on the marital relationship (Kail, 2014). The EMS provider might be experiencing post-traumatic stress symptoms unknowingly, and consequently upset the relationship with their spouses, leaving

both partners ultimately burned out, psychologically weakened and dissatisfied (Klarić et al., 2013). This supports the notion of Bowen's family systems theory which asserts that individuals choose partners who have equivalent levels of differentiation to their own and family functioning is influenced by relationship patterns that govern where problems develop in a family (Bowen, 1950, cited in Gurman & Kniskern, 2013).

The family systems theory also has the viewpoint that clinical symptoms usually develop during periods of heightened or prolonged family tension and the level of tension depends on the stress a family encounters, how a family adjusts to the stress, and on a family's connection with the extended family and support networks (The Bowen Centre, 2015). Tension or anxiety increases the intensity of one or more of the relationship patterns, such as marital conflict or emotional dysfunction, and the specific symptom is largely determined by the patterns of emotional functioning that dominate that family system (Goldenberg & Goldenberg, 2000). The marital relationship is also impacted because the spouse of the EMS personnel has continuous concern for their safety, due to the fact that they are exposed to high rates of trauma and violence (Regehr, 2005). When EMS personnel discuss these traumatic incidents, their spouses become even more aware and concerned about the risks their partners are exposed to (Regehr, 2005). Two of the participants stated:

"It impacts our relationship because hearing about incidents he's exposed to makes me worry about him and I see how it can impact him. There are times when he also doesn't open up about his day and becomes withdrawn

which is difficult because as his wife I really want to be there for him but if I don't know what's wrong then I can't help." (Participant 1)

"Yes this does have an impact on our relationship because there are times when I wouldn't want her to go on calls and would want to go with her. It feels that it impacts me because when she discusses the trauma I didn't know how to help her; I felt helpless." (Participant 3)

Another participant agreed that there were times that their relationship was impacted and reiterated that her spouse repressed his emotions, becomes withdrawn and irritable at her when she attempts to talk about his work-day. She expressed that:

"At times, it has an impact on our relationship but mainly, because I worry about what he's been through and I get frustrated that he doesn't want to talk about it, because I want to talk about it and help him. He then gets irritated with me and an argument ensues, thus I would actually say that it does have impact." (Participant 8)

To the contrary, another participant expressed that the discussions of traumatic incidents do not have a negative impact on their relationship, but rather a positive one. The following quotation refers::

"It strengthens their relationship. We are both in the EMS field thus when she discusses traumatic incidents then I feel I can relate to her and feel I can support her." (Participant 6)

Brough (2005) found that due to the intense nature of their profession, EMS personnel commonly develop a high degree of dependence on their colleagues, relying on them for both practical and emotional social support when

encountering traumatic or violent situations. In a sense, the above participant was also a colleague of his spouse and could relate to her more, as they were both in the emergency service profession. Research has established that EMS personnel tend to share much more detail of traumatic incidents with their colleagues than they would with family, for various reasons, and in the above quotation, the participant felt that the commonality of them both working in the EMS field, brought comfort and strengthened their relationship, as they both understood the risks and demands of the profession (Mashigo, 2010).

A majority of the participants felt that secondary trauma negatively impacted their relationships due to decreased quality time/social activities as a result of the shift working hours, their spouses distancing themselves, increased arguments, and a general breakdown in communication (Klarić et al., 2013). The next subtheme focuses on how the discussing of these experiences of secondary trauma impacts the spouses of the EMS personnel, specifically.

5.4.2.3. Sub-theme 2.3: Secondary trauma has an impact on the spouse of the EMS personnel

This sub-theme explores how secondary trauma could impact the spouses of EMS personnel. Clinical observations and research have shown that the effects of traumatic events are not limited to the persons primarily exposed to the event, but often affect significant others in their environment, namely, their spouses, families, friends or caregivers (Dekel & Monson, 2010). The following quotation refers:

"Depending on the incident, I can feel traumatised myself but sometimes I feel really sad for the patient, or really upset if a child is involved in any

way. He doesn't often talk about the death of a patient, but if he does, it can be hard to hear and make me worry about his well-being. I also tend to then think of my own death or if something had to happen to him." (Participant 5)

Literature has also established that spouses and children of EMS personnel could exhibit the same emotional, behavioural and physiological symptoms that the EMS worker may present with (Figley, 1995). Secondary traumatization can start with spouses' efforts to emotionally support their troubled partners, attempting to understand their feelings and experiences and, ultimately, empathize with them (Dekel & Monson, 2010). During this process, spouses could internalise the traumatized person's feelings, experiences, and even memories, as their own, which could trigger similar symptoms (Dekel & Monson, 2010). This was evident from the participants' responses that at some point during, or after the discussion of the traumatic incidents, their emotions were compromised and they were, most probably, experiencing secondary trauma. The following quotes refer:

"When he tries to explain an incident I don't understand all the terms he is using. He talks about p1 and p4 and has to explain all the time what this means. It does affect me if he describes an incident that involves children, like a young child in a car accident and the child has passed away. He told a really terrible story about a patient that was a child and I cried when he told me." (Participant 7)

"I feel sad for the trauma that people go through. I feel horrified by what other people can also do to people, for example if my wife talks about a patient, who was raped, or a child that gets killed in a car accident."

(Participant 2)

These responses reflect that spouses do experience symptoms of secondary trauma, such as feeling traumatised, helpless, sad, confused and worried, after hearing of incidents their spouses had seen or experienced. Bowen (1950) asserts that every family member is connected to each other through a system of overlapping and intertwining relationships, therefore, if one of the family members is exposed to trauma on a regular basis, the spouse, children and family system as a whole could be negatively impacted (Becvar & Becvar, 2006).

All the participants indicated that their spouses, as well as their relationships, are impacted by the trauma that the EMS personnel witness and describe; however, the perceived effects of the secondary trauma are varied. The impact that this type of stress and secondary trauma can have on the behavioural changes in the EMS personnel and their spouses will be discussed under the next theme.

5.4.3. Theme 3: Behavioural changes

During the data analysis, another theme, *Behavioural changes*, was identified, which was then sub-divided into two sub-themes. The organisation of these themes is presented in Table 5.4. The section following Table 5.4., first discusses the relevance of the overarching theme, and then focuses on each of the sub-themes.

Literature has established that emergency service personnel may exhibit behavioural changes, including emotional numbing, hyper-vigilance, mood swings, anxiety and exaggerated concern for safety (Regehr, 2005). Emotional numbing is one of the strategies used to cope with stressful events, which can further isolate family members and 'research has suggested that numbing, related to traumatic stress reactions, is significantly associated with negative feelings of family members toward the

relationship" (Regehr, 2005: 4). Due to repeated trauma exposure, EMS personnel may also become hyper-vigilant, which involves a persistent sense of insecurity, preoccupation with possible unknown threats, constantly watching and scanning surroundings, and being easily startled (Iranmanesh, Tirgari, & Bardsiri, 2013). Post-traumatic symptoms can also influence EMS personnel to become overly concerned about the safety of their spouses or families (Regehr, 2005).

It appears that there is reluctance in EMS personnel to seek timely relief for issues or problems they might be experiencing, before these problems worsened to become serious (Kail, 2014). This reluctance to seek help is related to both physical and mental health needs, and may be due to a 'hero, not victim' self-image, inhibiting emergency service personnel from recognising their own support needs, or acting on these needs when recognised (Kail, 2014). Feelings of being overwhelmed, powerless and helpless may also have a significant impact on the self-esteem of EMS personnel and damage their feelings of control and invulnerability, which are necessary to cope in the emergency service field (Young, Koortzen, & Oosthuizen, 2012). Consequently, stress, anxiety, fatigue and post-traumatic stress symptoms could build up over time, influencing behavioural changes in the EMS personnel, which could have a ripple effect on their spouses. According to the family systems theory, if one, or both, member/s in a two-person system become/s stressed or anxious, either from internal or external factors, then the stability of the family system is threatened (Gurman & Kniskern, 2013). When the anxiety subsides, the two-person system returns to being a calm, peaceful system, but if the anxiety persists, or is too great, then others may become involved, such as other family members or social support systems, forming a series of interlocking triangles (Becvar & Becvar, 2006).

The participants were, therefore, posed several questions aimed at understanding behavioural changes in their spouses, as well as behavioural changes in themselves, since their spouses commenced working in EMS. All the participants explained that there had been some behavioural changes in their spouses, as well as in themselves, since their spouses commenced working in EMS. These questions yielded two subthemes, listed in Table 5.4. and include comments to illustrate this theme.

Table 5.4: Major Theme and sub-themes relating to behavioural changes

Major overarching theme	Sub-themes
Behavioural changes	Sub-theme 3.1: Behavioural changes in their spouse
	Sub-theme 3.2: Behavioural changes in themselves

5.4.3.1. Sub-theme 3.1: Behavioural changes in their spouses

EMS personnel may exhibit different behavioural changes due to consistent exposure to trauma, fatigue, post-traumatic stress symptoms, destructive coping mechanisms, poor working conditions and a lack of social support (Iwu, 2013). These behavioural changes may vary and the following quotations refer:

"She is more aware of her surroundings and thinks things that she has seen at work are going to happen to her. This influences our relationship because it feels like she's anxious all the time and unhappy." (Participant 6) "When I first met him he was studying and was a completely different person; now he's very closed off and quiet. He often comes home straight after work and is always quiet or says he just a bad day at work. When he was studying, he was smiling and laughing but now is serious and quiet. Usually if he hasn't had an emergency call he's ok but if he had a call, then

his facial expression gives it away but not every single time."(Participant 1)

"Yes he has become more withdrawn and I understand that he can't always talk about work or incidents he's exposed to. He also sometimes has a short temper, especially if he had a bad day." (Participant 3)

Literature confirms the above comments that EMS personnel may exhibit behavioural changes, such as emotional numbing, withdrawal, irritability, low tolerance levels and anxiety, due to the high stress and traumatic incidents they deal with on a regular basis (Porter, 2013). A research study by Shantz (2002) revealed that the brain becomes conditioned by repeated encounters with stressful circumstances, or repeated psychosocial stressors, and begins to react under emergency conditions, even when no actual emergency occurs. The repeated encounters with psychosocial stressors initiate stress responses in individuals, which influence the body to be in a continuous state of psycho-physiological arousal (Shantz, 2002). The effects of such a condition would include: chronic elevation of blood pressure with no evidence of congenital circulatory defect, gastrointestinal distress, sleeplessness, abrupt change in mood patterns, withdrawal from normal activities, inappropriate emotional reactions to normal circumstances, inability to defuse after a call is cleared, high risk behaviour, and psychophysiological distress (Shantz, 2002). According to the family systems theory family projection could also occur in which the parents transmit these emotional and behavioural problems to a child and the transmission of undifferentiating can occur through the mother-father-child triangle which can impair the functioning of one or more children and increase their vulnerability to clinical symptoms (Becvar & Becvar, 2006). The next sub-theme focuses on one

of the objectives, namely, to explore the experiences of personal, behavioural and emotional changes in spouses of EMS personnel.

5.4.3.2. Sub-theme 3.2: Behavioural changes in themselves

This sub-theme focuses on behavioural changes that may occur in the spouses of EMS personnel. Literature has established that spouses of EMS personnel may exhibit changes in their behaviour, influenced by secondary trauma, having to take on extra responsibilities in the household due to EMS shift work, seeing their partners suffer, or helping to manage their partners' psychological difficulties (Renshaw, Allen, Rhoades, Blais, Markman, & Stanley, 2011). Spouses of EMS personnel could exhibit similar behavioural changes as their spouses, such as hyper-vigilance, irritability, heightened awareness, anxiety, overly concerned for the safety of spouses and families (Renshaw et al., 2011). Regehr (2005) asserts that spouses appear to develop sensitivity to the mood state of their partners and would try to manage their partners' mood to avoid distress and conflict. Various changes took place in the participants' behaviour since their spouses commenced working in EMS. The following quotations refer:

"I feel more protective of my wife; more anxious and worried about her." (Participant 6)

"There have been no changes in my personality but I have had changes in my behaviour because I feel more insecure about our relationship because of what he goes through; I worry about him and am not my normal happy self. I worry for his safety and emotions." (Participant 4)

"I feel more vigilant about my surroundings as well as more protective and worried about my wife. I get frustrated because at times I want to help her and give her the answers but am not able to." (Participant 2)

As reflected above many of the participants feel overprotective of their spouses and literature supports their perceptions that they feel more anxious, hypervigilant, have increased frustration levels, increased insecurities, feel helpless and worry about their spouses regularly, which represent symptoms of secondary trauma (Regehr, 2005). These responses also support the notion that work-related stress and burnout reported by EMS personnel is associated with increased stress for spouses at home. Work stress is thus transferred across settings and between individuals, and is not limited to the EMS personnel themselves (King et al., 2014).

Burnout has also been associated with increased marital tension, and conflict has been reported by both EMS personnel and their spouses on a daily basis (King et al., 2014). The literature cited and the quotations of the participants, therefore, confirm that the challenging duties of EMS personnel, as well as their behavioural changes, influence behavioural changes in their spouses. These finding also suggest that emergency work, not only the secondary trauma, is contributing to tension and conflict between spouses. The impact of this conflict on the marital relationship will be explored in the next theme.

5.4.4. Theme 4: Impact of emergency service work on relationship

A fourth major overarching theme, *Impact of emergency service work on relationship*, was identified and sub-divided into two sub-themes. The organisation of these themes

is presented in Table 5.5: and the section thereafter, firstly discusses the relevance of the overarching category, and then focuses on each of the sub-themes.

Table 5.5: Major Theme and Sub-themes relating to the impact of emergency service work on relationship

Major overarching theme	Sub-themes
Impact of emergency service work on relationship	Sub-theme 4.1: Negative impact of emergency service work on relationship
	Sub-theme 4.2: Positive impact of emergency service work on relationship

According to the previous themes, secondary trauma can have an influence on the marital relationship; however, this theme is different, as it focuses specifically on how emergency service work, namely, long working hours, inflexible shift times, high stress and communication challenges can impact the marital relationship.

EMS personnel experience many challenges daily that can lead to severe distress, burnout, physical illness, secondary trauma, and a decrease in the quality of life and service provision (Iwu, 2013). Family support has a huge impact on reducing the effects of the highly stressful work of emergency service personnel, yet spouses are not immune from the trauma and stress their partners face (Regehr, 2005). Research findings suggest that job stress can reduce the quality of marital interactions and can influence the other spouse to feel more negatively about their relationship (Regehr, 2005). Quality time can be impacted due to the fact that once the EMS personnel return home, they are fatigued from long shifts that require a great deal of physical, emotional, and cognitive energy. Social activities can also be difficult to arrange due to shift work or fatigue (Regehr, 2005). Literature has also found that the daily frustrations of emergency work; the inopportune calls from work, the changes to schedule, changing

co-workers, dealing with shift work and the unpredictability of overtime could all impact the marital relationship and family (Porter, 2013). Research also highlights that concern for the safety of the EMS personnel is heightened due to the unpredictable nature of the job (Porter, 2013). However, some participants felt that it had a positive impact as well, and will, therefore, be explored under the next two sub-themes.

5.4.4.1. Sub-theme 4.1: Negative impact of emergency service work on relationships

Three participants supported the negative impact of emergency work on relationships in the following ways: increased arguments, decreased quality time due to working hours, distancing from their spouses, communication breakdown and less social activities due to shift work. The following quotations refer:

"We have more arguments because I'm pushing him to talk. On Sunday he goes in to do paperwork and I get upset because it could be family time. The hours are a big problem as they are difficult hours for a normal relationship. I often can't go to functions, or I go alone, because he's working. It does take a toll on our relationship. It's difficult for him and I, and it's frustrating for him too because he sends message to say I wish was there with you." (Participant 1)

"It impacts our relationship because there are times when he pushes me away and becomes distant, and this upsets me because I like to have open communication and to be able to support him." (Participant 8)

"It can impact our relationship negatively because I expect her to be sympathetic to me like she is with her patients but at times she's not and this frustrates me." (Participant 6)

The above quotations support Kail's (2014) argument that family breakdown might occur as a result of the stress of the job, including the unsocial shift work, which increases the strain on family life. There is also a concern, related to shift work, surrounding the degree to which family time is compromised and the fact that family responsibilities are not equally shared (Porter, 2013). The relationship can also be impacted, depending on how much EMS personnel are able to share the emotional stresses of their role with their spouses (Kail, 2014). As established in the above responses, some EMS personnel choose not to talk about traumatic events with their partners, preferring to protect them, while denying themselves an outlet to process their experiences, and appearing closed to their partner (Kail, 2014). Other EMS personnel are more open about their experiences, which can create an emotional burden and possible secondary trauma for the partner, causing more strain (Porter, 2013). In the next section the positive impact of emergency service work on relationships is discussed.

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5.4.4.2. Sub-theme 4.2: Positive impact of emergency service work on relationship

According to Regehr (2005), being the spouse of an EMS worker has its challenges; however, some spouses report a great deal of pride in the career choice of their partners. Due to the nature of emergency service work, some spouses indicated that they were amazed by the work that their partners do and were proud of the risks they take to save people's lives; some spouses and children also viewed their family member as a hero (Regehr, 2005). Five participants concurred and the following quotations refer:

"It has a positive impact because of the way she helps people and she also brings that caring nature into our relationship and helps me as a person."

(Participant 6)

"...I have always admired my spouse for the work she does and this also helps to give me insight, as well as insight into our relationship."

(Participant 2)

Judging from the above responses, EMS work can also impact the relationship in a positive way as some EMS personnel bring their caring and supportive nature into the relationship; they bring the insight learnt in EMS, into their spousal role in a constructive way, to benefit the relationship. The following quotation refers:

"I feel so proud of the work my husband does; he has changed people's lives and I feel honoured to be married to a man like that." (Participant 5)

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Reliance on peers and family as a form of social support is very important for EMS personnel and in many studies, social support has emerged as a major resource for effective coping, especially if used in conjunction with other coping mechanisms (Mashigo, 2010). The next theme focuses on the type of social support that is provided to EMS personnel and their spouses, and the role it plays.

5.4.5. Theme 5: Social Support

Literature by Mildenhall (2012) indicates that social and peer support is the most used coping strategies for emergency personnel when dealing with stressful feelings or experiences. Beaton, Murphy, Pike & Corneil (1997) investigated the influence of workplace social support on samples of paramedics and fire-fighters, demonstrating that these emergency service workers cope with inherently dangerous and stressful

occupational demands by seeking social support from colleagues, friends, and family members (Brough, 2005). In addition, because of the shift-work, they naturally develop an intense dependence on their colleagues for both practical and emotional social support, especially when encountering challenging or violent situations (Brough, 2005). Regehr (2005) agrees that support from colleagues, and in particular spouses, is viewed as very important to EMS personnel. Social support systems (family, friends, colleagues and organisations) can help to improve an EMS provider's quality of life and can assist with providing support during stressful or traumatic experiences (Hepworth, Rooney, Rooney & Strom-Gottfried, 2013). On the other hand, a lack of social support and conditions of chronic stress, according to the family systems theory, could lead to societal regression in which both the family and society could lose contact with their intellectually determined principles and resort to an emotional basis for decisions that offer short term relief (Gurman & Kniskern, 2013). This could then result in greater discomfort and further anxiety (Gurman & Kniskern, 2013).

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All eight participants identified some form of social support, which led to the development of this theme. The most commonly identified forms of social support were friends, family and co-workers. The following two quotations refer:

"My parents are divorced but I'm very close to my mother. My family and siblings are supportive and my friends." (Participant 7)

"I have a very close family and extended family. I also have a close circle of friends and receive wonderful support from my co-workers. My family is also religious and I receive support from our church." (Participant 6)

The above quotation intimates that the mutual support of co-workers provides a great deal of comfort and connectedness (Regehr, 2005). Often informal catch-ups after calls,

and casual discussions around the office about protocol, past experiences and impacts of certain jobs on individuals, helps EMS personnel to debrief informally (Porter, 2013).

The other six responses were very similar in identifying friends, family and colleagues as their social support systems; however, one participant did complain that her friends did not always understand the feelings and experiences she faced due to the nature of her spouse's occupation:

"I do open up to friends but they don't really understand. My mom helps a lot, she's more understanding of my situation, but others don't always understand because they are unaware of the pressure our relationship can be under due to his work." (Participant 4)

A research study by Mashigo (2010) explains that, although reliance on family can be UNIVERSITY of the high, EMS personnel are also selective, to varying degrees, about what they share with different members of their family, either to protect them from experiencing secondary trauma, or because they may not feel that their family understands what they have seen and experienced. Spouses may, similarly, feel that their families or friends may not understand their situation (Porter, 2013). Even though family and friends may not always understand the complexity, stress and emotions that accompany EMS work, each participant identified some form of social support, often including a spouse, or significant other, and colleagues. The reliance on social support varied with each participant and the type of social support provided, determined whether the support was helpful, or not. However, all the participants indicated their appreciation and valued the support that they received.

Following on from this theme, the coping mechanisms employed by EMS workers and their spouses, played an important role in coping with the frequent pressures of emergency service work. This theme will be discussed next.

5.4.6. Theme 6: Coping mechanisms

Coping mechanisms, was identified as a major theme during data analysis, which was then dissected into two sub-themes. The organisation of these themes is presented in Table 5.6: and the section following Table 5.6., firstly discusses the importance of the overarching theme, and thereafter, focuses on each of the sub-themes.

Table 5.6: Major Theme and Sub-themes relating to coping mechanisms employed by EMS personnel and their spouses

Major overarching theme	Sub-themes
Coping mechanisms	Sub-theme 6.1: Current coping mechanisms
	Sub-theme 6.2: Relationship coping strategies

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Lazarus & Folkman (1984: 141, as cited in Harper, 2013) defined coping as the "constantly changing, cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person". Factors such as age, gender and personality play a part in influencing an individual's ability to deal with, or manage stress, which directly impacts their ability to cope or not (Porter, 2013). An individual's support system, their personality characteristics, values, commitments, goals and beliefs about him/herself and the world, helps to define the stakes that the person identifies as having relevance to well-being in a specific stressful encounter (Porter, 2013).

A review of literature on stress reveals that individuals in a range of professions usually take two approaches to reduce psychological and physiological stress, namely positive coping mechanisms or negative coping mechanisms (Mashigo, 2010). Positive coping mechanisms involve constructive methods, such as having support from family and friends, or a strong social support system, in an attempt to reduce the stress (He, Zhao & Archbold, 2002). On the contrary, negative coping mechanisms involve self-destructive methods to reduce stress, such as avoiding friends and family, drinking large quantities of alcohol, or use of recreational drugs (He et al., 2002).

Each individual copes differently with stress; therefore, each participant was asked how they personally coped with stressors, as well as the strategies they employed to help manage the challenges in their relationships. Their responses yielded two sub-themes as illustrated in Table 5.6., which are discussed below.

5.4.6.1. Sub-theme 6.1: Current coping mechanisms

There are different ways that EMS personnel cope with stress, such as: being aware of personal limitations, taking part in peer counselling, participation in group discussions, professional debriefing sessions, humour, eating a proper diet, sleeping and exercising regularly, as well as perusing positive activities outside of EMS (Sanders et al., 2012). All the participants expressed that they and their spouses had various coping strategies that helped them to cope. The following quotations refer:

"I paint; talk to my family or friends; do running and cycling to help me cope and release my stress." (Participant 3)

"I enjoy eating, watching television and playing computer games to help me to cope and release my stress." (Participant 2) "I try to communicate regularly; have a good network of friends; seek counselling, if I need to, and spend time with my family." (Participant 5)

Porter (2013) found that the most common coping strategies used by EMS personnel included, social support, communication, informal support, including informal debriefing and mentoring, the use of humour, as well as exercise. All the coping mechanisms expressed by the participants in this study were positive, and each participant had their own individual strategies to cope with stress.

Couples also develop strategies to cope with stress or challenges in their relationships, which introduced the next sub-theme.

5.4.6.2. Sub-theme 6.2: Relationship coping strategies

Every couple faces challenges in their relationship due to stress, health issues, trauma, financial issues, change and the strain of everyday life (Regehr, 2005). It is, therefore, important that couples develop coping strategies in their relationship to help them to manage stress and overcome challenging situations; which is especially important for EMS personnel and their spouses, due to the nature of their profession and its demands (Regehr, 2006). Research by Bélanger, Sabourin & El-Baalbaki (2012) found that throughout life, couples will be challenged by various types of stressors, and stress has been confirmed to affect marital communication and marital satisfaction. Bélanger et al. (2012) explains that, for most people, the quality of their marital relationship is an important predictor of their general well-being and, because of the centrality of this relationship, when facing stressors, partners use joint efforts in problem-solving interactions and

other coping strategies in order to re-establish satisfaction and maintain marital adjustment.

When asked about the current coping strategies used in their relationships, all the participants voiced different strategies that helped them to cope in their relationships. The following quotations refer:

"Open communication with my spouse; we talk about the challenges."

(Participant 6)

"I try support my spouse by listening; giving her a hug; doing something fun; having time to do our own individual hobbies." (Participant 2)

"I try to communicate openly with him and build a trust relationship so that he trusts me and feel's comfortable to open up to me. If we fight I try resolve it and to be understanding. I also try have a date night regularly, which can be hard with his shifts but we try." (Participant 7)

Bodenmann (2005) asserts that couples facing stress use both individual and dyadic coping strategies in order to reduce stress, which include both positive and negative components. Dyadic coping is considered positive when it is supportive, collaborative and delegated; whereas dyadic coping is considered to be negative in the presence of hostile behaviours, ambivalence and superficial coping behaviours (Bodenmann, 2005). Bélanger et al. (2012) report on several studies which reveal that positive dyadic coping significantly correlates with a better quality of marital relationship, with lower levels of experienced stress and better physical, as well as psychological well-being. Although coping mechanisms varied from participant to participant, each of the eight participants identified

some form of coping mechanism for themselves and their relationships, and all the coping mechanisms described were healthy, positive dyadic coping strategies.

Social support and coping mechanisms have been acknowledged to play a large role in assisting EMS personnel and their spouses to cope with the demands of emergency service work, as well as secondary trauma. On the same level of importance is the type of external support provided to EMS personnel and their spouses. The next section discusses this external support as the final theme.

5.4.7. Theme 7: Support for EMS personnel and spouses

Research by Iwu (2013) found that EMS work is a source of stress for families and various recommendations have, therefore, been made of the type of support that should be provided to EMS workers and their families. These recommendations include, the introduction of family-friendly work practices, such as flexible work schedules, dependent care assistance, leave arrangements, counselling and referral services (Iwu, 2013). Operational, as well as psychological, debriefing is vital for the positive psychological functioning of paramedics and involves the coming together of individuals, who have directly or indirectly been exposed to a critical or traumatic incident (Porter, 2013).

Critical incident stress management (CISM) is a programme that was developed in the 1970s to help emergency workers debrief after exposure to critical incidents (Sanders et al., 2012). CISM was designed to provide EMS personnel with a chance to discuss their feelings about a call or event that had a major impact, as well as to help them understand their reactions and reassure them that, what they are experiencing, is normal

(Sanders et al., 2012). Employers should provide occupational health services or employee assistance programmes that provide support to address mental health, as well as physical health, needs that prevent their employees from working productively. However, research has revealed that some of the follow-on needs for EMS workers, such as family stress and help to retrain for another job, were less well met (Kail, 2014). While support may be available for the EMS personnel, it has been revealed that there is little support provided to the spouses of EMS personnel (Regehr, 2005).

Emerging from this theme participants were asked what type of support they thought should be provided to EMS personnel, as well as the spouses of EMS personnel. The following quotations refer:

"Counselling; debriefing; group sessions; training; team building." (Participant 8)

"I don't know much about support or availability of support. But after every shift it would help to sit down for an hour and get counselling, they need professional help. I feel that he needs it, but he won't admit this. I feel debriefing after a hectic accident is important or someone dying in the ambulance is very traumatic. He blames himself for things that happen, for example, one day he had to see 3 dead bodies, and phone the families. I will say to him "it's not your fault", and he will say but you don't understand. I knew what I was getting into when we started dating but it's more difficult than I thought it would be. Thinking that if we had a child then it would be putting the child through this too and it's not fair that the family has to go through this. There should be help and support offered at work in some way. He goes to gym after work as a release from the stress, and even though it's less time with me, it is helping." (Participant 1)

"I think there should be psychological support provided to them regularly and that they should have access to psychologists/counsellors. The managers of the branches should be trained on how to pick up if a staff member needs psychological assistance or if there is behaviour changes and then have resources to refer the staff member. I think it will also help that they are provided with training on coping mechanisms/building resistance every 6 months or so." (Participant 6)

There were also similar responses to the question regarding the spouses of EMS personnel. The following quotations refer:

"There should be support provided, such as once a month go to a support group with other families, like an AA meeting. I don't open up with him like I might in a support group; I might say more if there is another person there feeling the same way. It's not the same with my own friends as they are not going through this situation, so likeminded people would be useful. If this was organised I would definitely go. It would help to have more information /psycho education. Possibly a brochure evening because partners are not educated enough about paramedic work — I didn't realise the dangers and the trauma and the time it takes to stabilise someone." (Participant 5)

"I think it would help to have a support group of sort in which spouses of EMS personnel meet regularly to support each other." (Participant 3)

"Coping mechanisms should be provided through group sessions with counsellors with individuals that are also in relationships with EMS personnel. Another idea is to introduce to your spouse to some of the people your spouse may have helped or saved." (Participant 6)

Judging from their responses, the participants felt that providing debriefing, support groups, psycho-education, training, coping mechanisms and information could help EMS personnel and their families achieve a good balance between their work and families. It would also provide them with the necessary support to cope in their role, as well as improve their attitude towards their jobs and prevent them from leaving a much needed profession in society (Iwu, 2013).

The participants also expressed that the implementation of the following support structures would assist in providing the necessary support for the spouses of EMS personnel: debriefing and support programmes for families; making available different coping mechanisms and information for the families; and providing adequate resources for individual and family therapy, when necessary. Regehr (2005) found that, in recent years, there has been a dramatic increase in the support services available to emergency workers within their organizations, and these are undoubtedly important for the well-being of workers. However, these support services rarely extend to family members, who continue be the primary source of nurturance and safety for workers. If this vacuum is not filled by the emergency service organizations, this valuable resource may not continue to function (Regehr, 2005).

5.5. Conclusion

Overall, the data gathered from the participants yielded seven themes, with various subthemes. These themes and sub-themes have been discussed in detail in this chapter, along with the importance, the demands, the short-comings and suggested remedies. The findings explored and described spouses' experiences of secondary trauma among emergency services personnel and the data indicated the significant importance of personal, behavioural and emotional changes that the EMS personnel and their spouses experience. The findings indicated that secondary trauma could have an effect on EMS personnel, which, in turn, affects their spouses, as expressed by the participants this study: feeling traumatised, helpless, sad, confused and worried, after hearing the incidents their spouses have seen or experienced. The findings also suggested that this could impact their relationships in different ways, including, worrying for the safety of spouses, communication problems, spouses becoming withdrawn and avoidance behaviours.

The findings of this study revealed that EMS work does have a negative impact on the marital relationship and particularly the couples quality time, communication and social activities. On the contrary, there was also a finding of a positive impact as some participants expressed being proud of their spouses and receiving insight into their relationships. Behavioural changes were also explored, to which the spouses responded that their EMS partners suffered behavioural changes, triggered by the nature of work, and, in turn, influenced behaviour changes in themselves. The emotional consequences of the stress and traumatic incidents experienced by EMS personnel also influenced their spouses and families. There was a discussion on the current coping mechanisms that the spouses of EMS personnel employed, to which the participants replied with choices of positive, constructive coping mechanisms for themselves and their relationships.

Lastly, the type of support that should be provided for EMS personnel and their spouses/families was examined and all the participants agreed that support structures and programmes for EMS personnel and families would assist them in coping better with the

challenging nature of their partners' occupation. These findings are important for future research regarding what organisations in the emergency service field should be introducing in order to better support their valuable staff, as well as their families.

The next chapter concludes this study with a Summary, Conclusions of the Findings and recommendations for further research.



CHAPTER SIX

SUMMARY OF FINDINGS AND RECOMMENDATIONS

6.1. Introduction

The aim of the study was to explore and describe spouses' experiences of secondary trauma among emergency services personnel. A qualitative research approach that sought to explore and describe the social phenomena, in terms of meaning brought by people (Boeije, 2010), was used to accomplish this aim. The research question: *What are spouses' experiences of secondary trauma among emergency service personnel?* was answered in Chapter Five, where the research findings were presented and discussed.

The study's four objectives, namely:

- To explore and describe spouses' experiences of personal, behavioural and emotional changes among emergency service personnel;
- To explore spouses' experiences of personal, behavioural and emotional changes in themselves;
- To explore and describe the influence of secondary trauma on the relationship of emergency service personnel and their spouses; and
- To explore and describe the coping mechanisms of the spouses of emergency service personnel;

were all accomplished by achieving the aim of the study and answering the research question.

The data was analysed and seven themes, with nine accompanying sub-themes, emerged, which were comprehensively unpacked in Chapter Five. A review of literature and a theoretical framework were used to substantiate, explain, compare and contrast the findings of this study. In Chapter Six, the final chapter of this study, a brief summary on each of the foregoing chapters, as well as the conclusions and recommendations from the findings, for future research, will be provided.

6.2. Summary

6.2.1. Chapter One

Chapter One served as the outline of the study through which the background of the study, the research problem, goals, objectives and methodology were introduced. A contextual framework on emergency services, as well as secondary trauma and its possible effects on the spouses of EMS personnel were discussed as the main focus of this study. The researcher's use of a qualitative research approach was considered appropriate in order to address the research problem and adequately work towards achieving the research goal and objectives. The selection of Bowen's (1950) family systems theory was applied as a theoretical framework for the study. The ecological framework of trauma by Dutton & Rubinstein (1995) was also discussed to provide an understanding of the nature and development of secondary trauma. The research question that was generated from the research problem and answered by means of an explorative and descriptive research design was motivated. The research methodology, according to a qualitative research approach, provided the process for the implementation of the study. Purposive sampling was applied as a sampling strategy, individual semi-structured interviews were conducted as a means of data collection, and thematic analysis was used as a method of data analysis (Creswell, 2009). Approaches

to ensure trustworthiness, as well as the ethical considerations of the study were also discussed.

In conclusion, the researcher inferred that the qualitative research approach, the designs and methodology used in the study were adequate to achieve the goals and objectives of the study.

6.2.2. Chapter Two

This chapter discussed the main theoretical framework of the study, which included both the Family Systems theory, by Murray Bowen (1950), and the Ecological Framework of trauma, by Dutton & Rubinstein (1995). The underlying theoretical framework of this research focused on the systemic approach, particularly family systems theory, focusing on the core concept that each family member is connected to each other as a unified whole, and if one family member is experiencing challenges, such as secondary trauma, then the other family members and the system as a whole could be impacted. The researcher continued to explore the fact that EMS personnel may bring their experiences of secondary trauma home, which in turn could influence their spouses and their family functioning.

This chapter also provided a better understanding of secondary traumatic stress by studying Dutton & Rubinstein's (1995) ecological framework of trauma. This model assisted in revealing how EMS personnel develop secondary traumatic stress, as well as how secondary trauma could have an impact on their family system.

6.2.3. Chapter Three

Chapter Three reviewed the literature relevant to the research topic and focused on the subject of traumatic stress. Firstly, it provided a brief introduction and understanding of trauma and discussed the differences between primary trauma and secondary trauma, as well as the impact thereof. Trauma, in a South African context, was also explored as the research was conducted in a South African context. This chapter continued to discuss stress and coping in the emergency service field, and the concepts of behavioural changes, functional and dysfunctional coping, as well as post-traumatic stress disorder arose within the context of emergency service work. The researcher also explored the concept of secondary trauma and the impact thereof on the spouses of EMS personnel, as well as the influence this could have on family functioning. The studies that were examined in this chapter included international, as well as local, research.

The researcher concluded that the literature reviewed, was indeed in line with the goals and objectives of the study, and served as a reference for the study

6.2.4. Chapter Four

Chapter Four provided a description of the research methodology that was implemented during the study. An explorative and descriptive research design, within a qualitative approach, was used for this study and was discussed in this chapter. The research problem, research goal and research objectives, as points of reference for the applied methodology, were also explained. The study's population encompassed the spouses' of EMS personnel living in the Gauteng region. The spouses, who participated in the study, were recruited from ER24, Netcare 911 and Hatzolah Emergency Services by means of purposive sampling.

Data collection occurred by means of face-to-face semi-structured interviews with the aid of an interview guide. An explanation was given of the interview protocol followed for all the individual interviews, as well as the data collection process. The interviews were transcribed verbatim and analysed according to Creswell's (2009) eight steps of data analysis. Themes and subthemes emerged through data analysis, which was presented in Chapter Five. Trustworthiness was used to ensure the reliability and validity of this study. Ethical considerations, such as confidentiality, voluntary participation, informed consent and informed assent were discussed, in detail, to provide evidence of adherence to research ethics in conducting this study.

The chapter concluded with the encountered limitations of the study, which included difficulties in recruiting participants for the study and cultural diversity. The fact that the findings of the study cannot be generalised, owing to the small sample, was also highlighted. Chapter Four provided a detailed account of the research methodology and the implementation thereof. The research approach and the research design were successfully used to provide detailed information that could be utilised in the data analysis process.

6.2.5. Chapter Five

Chapter Five encompassed the research findings generated from the spouses' of the EMS personnel and were presented by means of themes and sub-themes. The demographic details of the participants, who participated in the study were given in a table format and then discussed in detail. The themes and sub-themes that emerged from the data analysis were presented, compared and contrasted to existing literature.

Eight spouses, five females and three males, were interviewed. The findings from the participants fulfilled the first objective of this study, namely to explore and describe spouses' experiences of personal, behavioural and emotional changes among emergency service personnel. Seven themes and their respective sub-themes were generated from the analysed data. A summary and conclusions of these themes are presented in the following sections.

6.2.5.1. Theme 1: Traumatic incidents at work

In order to establish whether EMS personnel experience secondary trauma, participants were asked how often their spouse was exposed to traumatic incidents at work. This was a relevant theme to the study because, if it was found that participants were exposed to traumatic incidents regularly, the possibility existed that these experiences and symptoms could be passed on to their spouses.

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All eight of the participants expressed that their spouses were exposed to traumatic incidents every time they were at work. These responses demonstrated that EMS personnel experience frequent exposure to traumatic incidents, and may, therefore, experience secondary trauma, and, in turn, bring this trauma exposure home.

6.2.5.2. Theme 2: Impact of secondary trauma on marital relationships

This theme addressed secondary trauma and the impact this has on the marital relationships. The development of secondary trauma was discussed and the ecological framework of trauma by Dutton & Rubinstein (1995) was used to obtain a better understanding of secondary traumatic stress.

The first sub-theme that emerged was whether EMS personnel discuss their traumatic incidents of work with their spouses and families. Six participants expressed that their partners do, which, on the one hand, was viewed in a positive light because it demonstrated open communication, but, on the other hand, it could also impact the relationship, should the spouses be traumatised by the content of what the EMS personnel discusses. Two participants expressed that their spouse previously did but have lately become more closed off, talking less than they used to about these incidents. Literature supports this finding that some EMS personnel may become more closed off, or repress their emotions, to try and avoid their thoughts of the trauma they had witnessed, finding it easier to block the incident out.

The next sub-theme that secondary trauma has an impact on the marital relationships, emerged as seven of the participants indicated that discussing the traumatic events does have an impact on their relationships in different ways. The impact of secondary trauma on their relationships emerged in the following ways: withdrawal from their spouses; heightened worry for safety; repression; mood swings; and heightened awareness of surroundings. Supportive literature revealed that the spouse may experience post-traumatic stress symptoms, without understanding their cause, and, in turn, disrupt the relationship with their spouses, leaving both partners ultimately burned out, psychologically weakened and dissatisfied. This supports the theoretical notion of the family systems theory in that if one family member is experiencing challenges, such as secondary trauma or burn out, then the other family members and the system as a whole could be impacted.

The third sub-theme explored how secondary trauma could have an impact on the spouses themselves. This was substantiated by the fact that clinical observations and research have established that the consequences of traumatic events are not limited to the persons primarily exposed to the event, and that these events often affect significant others in their environment, namely, their spouses, families, friends or caregivers. The majority of responses reflected that the spouses do experience symptoms of secondary trauma, such as feeling traumatised, helpless, sad, confused and worried, after hearing about the incidents their spouses had seen or experienced. This was also consistent with the family systems theory by Bowen (1950), who asserts that every family member is connected to each other through a system of overlapping and intertwining relationships, therefore, if one of the family members is exposed to trauma on a regular basis, the spouse, children and family system as a whole could be negatively impacted.

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This theme met one of the objectives of the study, namely, to explore and describe the influence of secondary trauma on the relationship of emergency service personnel and their spouses.

6.2.5.3. Theme 3: Behavioural changes

This theme discussed behavioural changes that occurred in EMS personnel, as well as behavioural changes that occurred among the spouses of EMS personnel. Literature has revealed that EMS personnel may exhibit different behavioural changes due to the consistent exposure to trauma, fatigue, post-traumatic stress symptoms, destructive coping mechanisms, poor working conditions and a lack of social support. The sub-theme, behavioural changes in the participants' spouses,

therefore, emerged, which described the behavioural changes that the EMS personnel exhibited, such as emotional numbing, withdrawal, irritability, low tolerance levels and anxiety, due to the high stress and traumatic incidents they deal with on a regular basis.

A second sub-theme examined the spouses' behavioural changes in themselves. Their responses supported the concept that spouses of EMS personnel exhibit changes in their behaviour, influenced by various factors, such as secondary trauma, having to take on extra responsibilities in the household due to EMS shift work, seeing their partners suffer, or helping manage their partners' psychological difficulties. Most of the participants felt overprotective of their partners and literature supported their responses, which were, they feel more anxious, hypervigilant, have increased frustration levels, increased insecurities, feel helpless and worry about their spouse continuously. You the

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This theme met two of the objectives of the study, which sought to explore and describe the spouses' experiences of personal, behavioural and emotional changes among their EMS partners; and the spouses' experiences of personal, behavioural and emotional changes in themselves.

6.2.5.4. Theme 4: Impact of emergency service work on marital relationships

This theme presented the impact that emergency service work (long working hours, inflexible shift times, high stress, and communication challenges) can have on marital relationships. The first sub-theme that emerged was the negative impact that emergency service work could have on relationships. Three participants supported the concept and described the negative impact in the

following ways: increased arguments, decreased quality time due to working hours, distancing from their spouse, communication breakdown, and less social activities due to shift work.

The second sub-theme that emerged was the positive impact that emergency service work could have on the relationship. Five participants agreed and expressed that they felt proud of their partners; that their partners brought a caring and supportive nature into the relationship; and that their partners used the insight, learnt on duty, in a constructive way to benefit the relationship.

6.2.5.5. Theme 5: Social Support

Social support was the fifth theme that developed and focused on the role of social support in the emergency services, as well as the type of support that is provided to EMS personnel and their spouses. All eight participants identified some form of social support, leading to the development of this theme. The most commonly identified forms of social support were friends, family and co-workers. The findings highlighted that a lots of peer counselling occurred on shift and, even though it was not always sufficient and professional support was also necessary, the mutual support of co-workers provided a great deal of comfort and connectedness to EMS personnel. It was also emphasised that family and friends do not always understand the feelings and experiences that the spouses of EMS personnel face, but regardless of that, each participant identified some form of social support. The reliance on social support varied from each participant, and the type of social support provided also dictated whether the support was helpful or not. However, all the participants expressed their appreciation and valued the support that they received.

6.2.5.6. Theme 6: Coping mechanisms

This theme addressed the study's fourth objective, which sought to explore and describe the coping mechanisms of the spouses of emergency service personnel. Coping strategies are a set of cognitions and behaviours aimed at managing and reducing the consequences of a situation that is viewed as stressful. Stress refers to a situation where the needs of an individual exceed the means s/he can draw upon. The first sub-theme focused on the current coping mechanisms of the participants, which included exercise, family time, communication, painting, eating, as well as counselling. All the coping mechanisms expressed by the participants in this study were positive, and each participant had their own individual coping strategies.

The second sub-theme involved the coping strategies used in their marital relationships, to deal with the challenges, such as the nature of EMS work, shift work, behavioural changes and secondary trauma. Coping strategies for their relationships included, open communication, affection, having individual hobbies, and doing fun things together. Although coping mechanisms varied from participant to participant, each of the eight participants identified some form of coping mechanism for their relationship, and all the coping mechanisms described were positive and healthy.

6.2.5.7 .Theme 7: Support for EMS personnel and spouses

The final theme that emerged involved the type of support that should be provided to EMS personnel and their spouses. The participants expressed that the type of support they anticipate for EMS personnel includes, counselling,

debriefing, group sessions, training and team building. There were also similar responses to the question regarding the type of anticipated support for the spouses of EMS personnel. The findings highlighted that there was currently only limited support provided to EMS personnel. The participants obviously felt that the provision of the anticipated support could help EMS personnel and their families achieve a good balance between their work and family; provide EMS workers with the necessary support to cope in their duties; improve EMS workers' attitudes towards their jobs, as well as dissuade them from leaving a much needed profession in society.

Through this study, the researcher acknowledges that EMS personnel experience secondary trauma and that its effects can be passed on to their spouses, impacting family functioning. Consequently, the following recommendations are made to different stakeholders.

6.3. Recommendations

The researcher developed two sets of recommendations: recommendations for future practice, to improve the well-being of EMS personnel and their spouses; and recommendations for future research.

6.3.1. Future practice

As some participants were either not aware of services available to EMS
personnel and their spouses, or their awareness was limited, more promotion or
marketing of the services should be organised.

- Restructure available employee wellness resources to ensure equal distribution of
 Employee Assistance Programmes at all emergency services bases, and in
 addition, inform the employees of the employee assistance services available to
 them and their families.
- EMS organisations to provide more support services to the spouses of EMS
 personnel, such as information regarding the nature of emergency services;
 psycho education; trauma; different coping mechanisms, as this was a need
 expressed by the participants themselves.
- Organisations to arrange support groups that are specifically for the spouses of EMS personnel, in which they can meet regularly to debrief and support each other.
- Further possible changes to the current support offered by emergency service organisations to include a mentor system for the EMS personnel, as well as better resources within the service as a whole.
- Introduce family friendly work practices in EMS organisations, such as more flexible work schedules, dependent care assistance, leave arrangements, counselling and referral services.
- Introduce a life skills programme so that individual employees can be empowered to take personal responsibility for their own wellness, at a minimal cost to themselves. This can assist employees to be more self-aware, when they are at risk of PTSD or depression, and implement preventative measures themselves, promptly.
- Training for the emergency services employees to include topics on clinical disorders and related symptoms, as this type of training could help them

recognise similar symptoms in themselves and be aware of their implications, in order to address these timeously.

6.3.2. Future research

- Further research could consider a more enlarged population, comprising EMS personnel and their spouses from several provincial facilities in South Africa, as well as an equal number of the different ethnic groups. This will yield more comprehensive insightful results, validating the findings of this study.
- Comparative studies between the experiences of secondary trauma among the spouses of EMS personnel in South Africa, as well as other countries in Africa, should be conducted for further expansion of the research on co-habiting families.
- In future, to utilise both interviews and questionnaires to extend such studies, if EMS personnel and their spouses would have the time to participate.
- Quantitative studies are also recommended on this subject to generate statistical data, empirical analysis and more generalised findings.
- Literature has revealed that emergency service work does impact the family and,
 therefore, implications of family-work interface could be further explored.

6.4. Conclusion

Through qualitative enquiry the research goal and objectives of this study were achieved, as well as the research question answered. A qualitative approach was utilised, as it was considered the best research method for this study and assimilated rich comprehensive data. The findings of the study provided a better understanding of the experiences of secondary trauma amongst the spouses of EMS personnel. This final chapter of the study provided the

reader with a summary and conclusions of the preceding chapters from the introduction, theoretical framework, literature review, applied methodology and the major research findings. Based on these findings, the researcher made a number of recommendations for future practice and future research.

In conclusion, the researcher hopes that this study will add to the development of studies on secondary trauma and its effects on the spouses of EMS personnel in South Africa. The researcher believes that the study contributes to the practice tasks of all social workers, working with emergency service families, to improve family functioning and to promote the well-being of the individuals involved.



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APPENDICES

Appendix I: Ethics clearance form

SR1



NAME: Kerry Lee Wheater

UNIVERSITY of the WESTERN CAPE DEPARTMENT OF RESEARCH DEVELOPMENT

UWC RESEARCH PROJECT REGISTRATION AND ETHICS CLEARANCE APPLICATION FORM

This application will be considered by UWC Faculty Board Research and Ethics Committees, then by the UWC Senate Research Committee, which may also consult outsiders on ethics questions, or consult the UWC ethics subcommittees, before registration of the project and clearance of the ethics. No project should proceed before project registration and ethical clearance has been granted.

PARTICULARS OF INDIVIDUAL APPLICANT

DEPARTMENT: Social Work	FACULTY: Human Sciences
FIELD OF STUDY: MA Child and Family Studies	SITY of the
ARE YOU: A member of UWC academic staff? A member of UWC support staff? A registered UWC student? From outside UWC, wishing to research at or with UWC?	Yes ☐ No ☐ Yes ☐ No ☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ ☐ Yes ☐ No ☐ ☐ Yes ☐ No ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
H	ARS OF PROJECT
PROJECT NUMBER: TO BE ALLOCATED BY SENATE EXPECTED COMPLETION DATE: October 2014	E RESEARCH COMMITTEE:
PROJECT TITLE: Spouses' experience of secondary traus	ma among emergency service personnel
TUDES VEV WARDS DESCRIBING BRAISCT. Second	ary trauma, emergency service personnel, spouses

Appendix II: Senate Research Committee Approval Letter



OFFICE OF THE DEAN DEPARTMENT OF RESEARCH DEVELOPMENT

11 February 2014

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by: Ms KL Wheater (Social Work)

Research Project:

Spouses' experiences of secondary trauma among emergency service personnel.

Registration no:

13/10/44

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study. WESTERN CAPE

Ms Patricia Josias

Research Ethics Committee Officer

University of the Western Cape

Private Bag X17, Bellville 7535, South Africa T: +27 21 959 2988/2948 . F: +27 21 959 3170 E: pjosias@uwc.ac.za www.uwc.ac.za

A place of quality, a place to grow, from hope to action through knowledg

Appendix III:

Letter of request for research study

13 March 2014

Dear Sir/ Madam,

My name is Kerry Wheater and I am a Masters student in Child and Family Studies at the University of Western Cape. I'm conducting my master's thesis on *Spouses' experience of secondary trauma among emergency service personnel*. I am doing a qualitative study and thus my sample size is small. My goal is to approach different emergency service companies in order to obtain permission to recruit 8 spouses of EMS personnel to participate in this exploratory study.

Therefore I hereby seek permission of your organisation to conduct my research study to explore spouses experiences of secondary trauma among emergency service personnel. I'm required to recruit 8 spouses of EMS personnel who work for your organisation to participate in this study and the following criteria will be used for selecting participants for the study:

- the spouse is required to be in a relationship with an EMS personnel member who has been working for the emergency service company for a minimum of two years;
- the spouse is required to be in a relationship with an EMS personnel member who works in a position in which she/he is exposed to trauma on a regular basis;
- the spouse should be married, or cohabitating, with the EMS personnel member for a minimum of two years;
- the participants are required to be conversant in English.

I have attached all my research proposal documentation which includes the Abstract, Proposal document, Ethical clearance form, Interview guides, Information sheet, and the Consent form for your own perusal. The obtained results from this research will be used to produce recommendations for social work intervention on working with EMS personnel and their families.

Yours Sincerely,

Kerry Wheater

0837115737

Appendix IV: Information sheet



University of the Western Cape

Private Bag X 17, Bellville 7535, South Africa
Tel: +27 21-959, Fax: 27 21-959
E-mail: mdejager@uwc.ac.za

INFORMATION SHEET

Project Title: Spouses' experience of secondary trauma among emergency service personnel

What is this study about?

This is a research project being conducted by <u>Kerry Lee Wheater</u> at the University of the Western Cape. We are inviting you to participate in this research project because you are <u>currently married or in a relationship with an emergency service (EMS) personnel who has been working for the emergency service company for a minimum of two years. The purpose of this research project is <u>explore and describe spouses' experiences of secondary trauma among emergency service personnel.</u></u>

What will I be asked to do if I agree to participate?

You will be asked to participate in an individual in-depth interview, which will be semi-structured in nature and will take approximately one to one and a half hours to conduct. The researcher will contact you in order to arrange for a suitable time and place to conduct the interview. The purpose of the research and the nature of the research process will then be explained to you. Permission will be solicited from you to use the interview for research purposes. This research involves voluntary participation and you have the option to withdraw at any time. A written consent will be obtained from you and you will be reassured that your identity will remain confidential. Permission to audiotape the session will also be acquired. These authorization forms and transcriptions will be held in a safe place. The researcher will explain the interview procedure and process to you. Interviews will follow a semi-structured interview guide which serves as a guideline for relevant topics that need to be addressed. You will be encouraged to provide clear descriptions of your experiences and be willing to discuss your past and present experiences, thereby revealing sensitive and personal information in the process. The semistructured interview guide will ensure standardization in the broad areas explored but will also allow interviewers to pursue unexpected and unique avenues that may be important to you. You will do most of the talking, but the researcher will give direction in the interview where specific topics raised by you will be further explored. The language use is important and the interview will be conducted in English but caution will be applied not to put you under pressure. Individual's

that speak another language such as, Afrikaans, Xhosa, Zulu, or any other language, but who are conversant in English, can participate in the study. Please see attached a summary of the questions that will be asked.

Would my participation in this study be kept confidential?

We will do our best to keep your personal information confidential. To help protect your confidentiality, you will be fully informed of all aspects of the study before being required to sign informed consent to your participation. Informed consent will be obtained from all participants to ensure quality and integrity. The researcher will also ensure confidentiality of your information by: having locked filing cabinets and storage areas; using identification codes only on data forms; and using password-protected computer files. For coded identifiable information: (1) your name will not be included on the surveys and other collected data; (2) a code will be placed on the survey and other collected data; (3) through the use of an identification key, the researcher will be able to link your survey to your identity; and (4) only the researcher will have access to the identification key. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.

In accordance with legal requirements and/or professional standards, we will disclose to the appropriate individuals and/or authorities information that comes to our attention concerning child abuse or neglect or potential harm to you or others.

What are the risks of this research?

There may be some risks from participating in this research study. The research may involve emotional risks to the subject that are currently unforeseeable. Awareness will also be given to any physical or emotional harm which could result from the study. Information that might harm the participants' employment or embarrass them will not be disclosed and will remain confidential. Debriefing will also be provided for participants that may request it, which constitutes an imperative part of the research process as it provides the participants with the chance to work through their experience and to address any negative feelings brought up their participation in the study. Those participants, who need debriefing, will be referred to a social

worker based at an employee wellness company called ICAS which will be arranged by the researcher and will remain confidential.

What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about spouses' experiences of secondary trauma among emergency service personnel. We hope that, in the future, other people might benefit from this study through improved understanding into the experiences of secondary trauma in South Africa, particularly with concern to family members of EMS personnel, a population often ignored. Due to the limited research that has been done in this area, this study would contribute to the knowledge base of exploring and describing the impact this type of highly stressful and traumatic job can have on the families of emergency personnel, particularly in South Africa. EMS personnel as well as their family members could benefit from this study because the overall outcome of this research would be to implement support structures and programmes for families, make available different coping mechanisms for the families of EMS personnel, as well as, provide the adequate resources for individual and family therapy where necessary. As a participant you will also be entered into a lucky draw to win a Woolworths voucher of R250.00.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

Is any assistance available if I am negatively affected by participating in this study?

Participants, who require counselling or debriefing, will be referred to a social worker based at an employee wellness company called ICAS, which will be arranged by the researcher and will remain confidential.

What if I have questions?

This research is being conducted by <u>Kerry Lee Wheater</u>, through the department of Social Work, at the University of the Western Cape. If you have any questions about the research study itself, please contact <u>Kerry Lee Wheater at: 0837115737; klwheater@gmail.com</u>.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Head of Department: Prof C Schenck University of the Western Cape Private Bag X17 Belville 7535

Tel: 021 9592011

Email: cschenck@uwc.ac.za

Dean of the Faculty of Community and Health Sciences: Prof J Frantz

University of the Western Cape

Private Bag X17 Bellville 7535

Email: jfrantz@uwc.ac.za

Tel: 0219592746

This research has been approved by the University of the Western Cape's Senate Research Committee and Ethics Committee.

Appendix V: Consent Form



University of the Western Cape

Private Bag X 17, Bellville 7535, South Africa Tel: +27 21-959, Fax: 27 21-959 E-mail: mdejager@uwc.ac.za

CONSENT FORM

Title of Research Project: Spouses' experience of secondary trauma among emergency service personnel

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

This research project involves making audiotapes of you. Permission to audiotape the session will be acquired. These authorization forms and transcriptions will be held in a safe place. The audio tape is used as an information aid which will assist the researcher in analysing the information and data recorded. The cassettes will be coded so that no personally identifying information is visible on them and they will be kept in a secure place (e.g., a locked file cabinet in the researcher's office). They will be heard or viewed only for research purposes by the researcher and her associates. The tapes will be retained for possible future analysis.

	I agree to be audiotaped during my participation in this study.
	I do not agree to be audiotaped during my participation in this study.
Parti	cipant's name
Parti	cipant's signature
Witn	ess
Date	

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

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Appendix VI:

Interview Guide

Biographical data of participant	Date:
Participant no:	
Age:	
Gender:	
Language:	
Ethnicity:	
How long have you been together with your spouse?	•
How long has your spouse been working in the emer	gency service (EMS) field?
How do you feel about your spouse working in the I	EMS field?
WESTERN CA	PE
How often is your spouse exposed to traumatic incid	lents at work?
Does your spouse discuss any traumatic incidents he	s/she may have been exposed to at work?
• If yes, does this have an impact on your relationship	, and how?
 How do you feel if your spouse describes a trauma work? 	tic incident he/she may have witnessed at
Have you noticed any behavioural changes in your	spouse since he/she has been working in

the EMS field?

•	If yes,	what	changes	have	you	noticed	and	how	does	this	behaviour	influence	your
	relations	ship?											

- Have you noticed any behavioural spouse in yourself since your partner has been working in the EMS field?
- What type of impact does your spouse working in the EMS field have on your relationship, if any?
- What are your current coping mechanisms?
- How does shift work affect you and your partner's relationship?
- Please will you describe your current family situation?

 UNIVERSITY of the
- What type of social support do you have?
- What type of social support does your spouse have?
- Have you and your spouse experienced any social challenges since your spouse started working in the EMS field?
- What strategies do you use to help manage any challenges in your relationship?
- What type of support do you think should be provided for EMS personnel?
- What type of support should be provided for the partner's/spouses of EMS personnel?

Appendix VII:

22 October 2015

To whom it may concern

Dear Sir/Madam

RE: Editorial Certificate

This letter serves to prove that the thesis listed below was language edited for proper English, grammar, punctuation, spelling as well as overall layout and style by myself, publisher/proprietor of Aquarian Publications, a native English speaking editor.

Thesis title

SPOUSES' EXPERIENCE OF SECONDARY TRAUMA AMONG EMERGENCY SERVICES PERSONNEL

Author

Kerry Lee Wheater

The research content or the author's intentions were not altered in any way during the editing process, however, the author has the authority to accept or reject my suggestions and changes.

Should you have any questions or concerns about this edited document, I can be contacted at the listed telephone and fax number, e-mail address or website.

Yours truly

Publisher/Proprietor

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