

**SECONDARY TRAUMATIC STRESS,
LEVEL OF EXPOSURE, EMPATHY AND
SOCIAL SUPPORT IN TRAUMA WORKERS**

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ABSTRACT

A review of trauma literature indicated that in comparison to PTSD there is very little research into the effects of secondary trauma, especially with regards to trauma workers. The present study explored the psychological impact of trauma workers who work with victims of violent crimes. Both Figley's (1995) trauma transmission model and Dutton and Rubenstein (1995) ecological model were used to develop a refined trauma model for trauma workers in South Africa, which formed the theoretical basis for the current research. This model looked at the relationships between specific key variables (level of exposure to traumatic material, empathy, and level of perceived social support) and secondary traumatic stress, and their interrelationship. In the present study relevant information was gathered from volunteer trauma workers (N=64) using self-report measures. Data was analysed using the following statistical techniques: Descriptive statistics, Pearson's Correlation Coefficients, Two Independent Sample T-Test, and a Moderated Multiple Regression. Results indicated that the trauma workers, to some extent, experienced symptoms of secondary traumatic stress. In addition, it was found that previous exposure to traumatic material, level of empathy, and level of perceived social support have a significant relationship with secondary traumatic stress. Social support was not found to have a moderating effect, but empathy emerged as a consistent moderator between the trauma workers previous exposure to traumatic material and secondary traumatic stress. Results also revealed that ones qualification made no difference in the development of secondary traumatic stress. In summary, this study expanded on knowledge into the effects of criminal violence in South Africa, particularly with concern to trauma workers, a population often ignored. This study was considered to be a contribution to trauma literature as it provides much needed empirical evidence.

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CHAPTER ONE: INTRODUCTION

**“When we open our hearts to hear someone’s story of devastation or betrayal,
our cherished beliefs are challenged and we are changed.”**

Saakvitne, 1996, p.25

1.1. INTRODUCTION

In South Africa the incidence of violent crime is an everyday occurrence that affects the majority of the population directly and/or indirectly. South Africa is often said to have a "culture of violence", as it appears to be a society that endorses and acknowledges violence as an adequate and justifiable way to solve problems and reach goals (Harris, 2002). Comparatively speaking, the incidence of violence in South Africa is extremely high, thus the chances of being exposed to violence is also high. This in turn increases the necessity of trauma psychologists, trauma counsellors and non-professional trauma workers in all sectors of society. Furthermore, it has become evident that working with such victims can be traumatic and emotionally challenging, impacting on the lives of such ‘helpers’ (professional and volunteer trauma workers). Therefore trauma is an important area of study in South Africa (Figley, 2003; Zimering, Munroe & Gulliver, 2003).

Despite the fact that trauma has recently become an area of increased interest in South Africa, the main focus of trauma studies (both nationally and internationally) have been on trauma caused by war and natural disasters, ignoring the effects of criminal violence (Dutton & Rubinstein, 1995; Figley, 1995; Friedland, 1999; Mendelsohn, 2002). Research into political violence in South Africa has been explored, but the exploration into the effects of criminal violence has only recently emerged (Ortlepp & Kopel, 2001; MacRitchie, 2004; Harris, 2002).

In addition to the neglect of studies on criminal violence, the majority of trauma studies have focused mainly on the primary victim’s experience and posttraumatic stress disorder (PTSD). In comparison little has been written and researched with regards to secondary/indirect victims (eg. trauma workers, family, friends, counsellors) and secondary traumatic stress (Figley, 2003).

Of those who can be victimised indirectly, trauma workers require the most attention as they have become an important resource in South Africa (Friedland, 1999; Ortlepp & Kopel, 2001; Wilson, 1998). Due to the lack of mental health professionals in communities and the high demands for this type of assistance, there is a diversity of those who are labelled as such, from those who are highly trained and specialised (eg. clinical psychologists, counsellors, and/or social workers) to those who are volunteers with minimal knowledge (eg. non-professionals or lay workers) (Swartz & Gibson, 2003). For the purpose of this study those who work with victims of violent crime/s will be referred to as ‘trauma workers’, as this term incorporates both those who are therapists, counsellors, social workers and those who have no relevant related qualifications (eg. non-professionals or lay workers).

Trauma workers hear tales of human suffering and observe the emotions of fear, helplessness and horror registered by survivors of criminal violence on a regular basis (Munroe, Shay, Fisher, Makary, Rapperport & Zimering, 1995). Research reveals that this responsibility may cause psychological symptoms in these individuals, which in turn may lead to secondary traumatic stress (Figley, 1995; Steed & Bicknell, 2001; Zimering *et al*, 2003). Despite this knowledge, Figley (1995; 2003) admits to the scant attention trauma workers have received in literature and the lack of studies that have been conducted with this sample (Adams, Boscarino & Figley, 2004; Figley, 1995; Salston & Figley, 2003). Figley (1995) highlighted that “therapist are vulnerable to experiencing stress as a result of their jobs, yet very few studies can identify the active ingredients that are most connected to this job/profession-related stress” (Figley, 1995, p. xiv). In addition to the lack of empirical studies conducted in this area, research concerned with secondary traumatisation has focused primarily on professionals (mainly those in the medical profession such as emergency workers, and paramedics) with studies incorporating trauma workers including non-professional being very limited. Therefore this study will include all forms of trauma workers (professional and non-professional) who work with victims of violent crime so to be more applicable to the South African context, and to extend research in this area.

Literature argues that hearing about trauma cannot alone cause secondary traumatic stress. Authors in the trauma field acknowledge that both individual characteristics

and environmental factors play a part in the development of both PTSD and secondary traumatic stress (Adams *et al*, 2004; Cornille & Woodard Meyers, 1999; Dutton & Rubinstein, 1995). A key variable in the development of secondary traumatic stress is the trauma workers level of exposure to traumatic material (Cornille & Woodard Meyers, 1999; Dutton & Rubinstein, 1995). This includes previous trauma history, the nature of the violent crime dealt with (ie. the severity and type of crime), and the frequency of exposure to violent crime(s). All these aspects of exposure play a vital role in the development of secondary traumatic stress (Adams *et al*, 2004). Although there are several studies in this area, they reflect conflicting results (Cornille & Woodard Meyers, 1999; Kassam-Adams; 1995; Steed & Bicknell, 2001). Due to these discrepancies the relationship between level of exposure to traumatic material and secondary traumatic stress is worthy of further exploration.

Figley (1995), a leading author in the field of secondary traumatic, believes that empathy is a key personality characteristic in its development (Figley, 1995; 2003). Although his belief is widely held by other authors (Adams *et al*, 2004; Stamm, Varra, Pearlman & Giller, 2002; Steed & Bicknell, 2001) there exists very limited empirical studies on the relationship between empathy and secondary traumatic stress to support this claim. Furthermore with concern to trauma workers there does not appear to be any research. Therefore the current research will explore the exact role empathy plays in the development of secondary traumatic stress with regards to trauma workers.

Literature on secondary traumatic stress also highlights social support as having a significant effect in the development of secondary traumatic stress (Flannery, 1998). However, literature lacks position in the way which social support has been conceptualised in empirical studies. Some empirical studies have shown social support to have a main effect as it is seen to act as an antecedent to stressors. It can occur in the absence of a stressor thereby protecting the individual from any negative outcomes. On the other hand social support has been reported to have a 'buffering' effect, and therefore is only necessary in the presence of stressful events. The confusion between both these distinctions has lead to inconsistent findings in studies investigating the role of social support in trauma (Esprey, 1996; Ortlepp, 1998; Wilson, 1999). This presents a further area for research.

In order to make a relevant contribution and add valuable information to the field of secondary trauma, this study attempts to address the gaps in trauma literature. To do so this study will focus on both professional and non-professional trauma workers who work with victims of violent crimes. Furthermore it will explore the relationships between the level of exposure to traumatic material and secondary traumatic stress, level of empathy and secondary traumatic stress, the level of perceived social support and secondary traumatic stress; and their interrelationship in attempts to make it clear the exact role of these variables.

1.2. CONCLUDING COMMENTS

In summary, the following study focuses on trauma workers who work with victims of violent crimes. The main purpose of this introductory chapter (chapter one) was to provide an introduction for the current research and introduce the key theoretical concepts which this study will explore. Below is an outline of chapters of the current research.

Chapter two provides insight into the nature of South African society. This is important as it locates the study within a particular context. It also highlights the need for trauma workers in South Africa, as they are an important resource and are in great demand due to the violent nature of South African society and relatively high levels of crime. Chapter two also examines the population of interest in this study– ‘trauma workers’.

Chapter three looks at the literature in the field of traumatic stress. It starts off by providing a brief introduction to trauma and the consequences of direct exposure to criminal violence (ie. posttraumatic stress disorder). This chapter further goes on to explore the concept of secondary traumatic stress, its relation to posttraumatic stress disorder, and the various terms which have been associated with it in the context of trauma work. The studies that will be examined in this chapter include research from South Africa and the rest of the world.

Chapter four discusses the main theoretical framework of secondary traumatic stress, and introduces a refined model for trauma workers in South Africa which forms the

basis of the current study. It further elaborates on each of the key characteristics of this model and the relevant studies conducted with regards to these variables.

Chapter five describes the methodology of the study, which is a discussion on how the research was practically carried out and the theory investigated (Terre Blanch & Durrheim, 1999). This chapter outlines the research aims, the research design, the research questions, the hypotheses, the sample, the procedure, the ethical considerations, and the statistical analyses that were carried out.

Chapter six looks at the results of the various statistical analyses which were performed on the data. These include internal consistencies of each scale and subscales, descriptive statistics, Pearson correlations, moderated multiple regression and Two- independent sample t-tests.

Lastly, chapter seven is a discussion of the results, limitations of the study, and implications for future studies. It further concludes the research.

CHAPTER TWO: **THE ENVIRONMENTAL CONTEXT OF SOUTH AFRICA**

2.1. VIOLENCE IN SOUTH AFRICA

In South Africa the incidence of violent crime is an everyday occurrence that affects the majority of the population directly and/or indirectly. A great deal of literature supports that South Africa has a 'culture of violence', which is a legacy of the apartheid era as well as challenges that the country is currently facing (Harris, 2002). This is evident by the current acts and levels of criminal violence which have become a prevalent part of life in South Africa (Schönteich & Louw, 2001). Furthermore it is argued that criminal violence is one of the most serious and complex issues facing South Africans. This is mainly due to violence being deeply rooted in the history of South Africa (Friedland, 1999; Harris, 2002; Schönteich & Louw, 2001).

From 1948 to 1994 the National Party ruled South Africa, and a system of racial segregation, referred to as Apartheid, was legalized, implemented and enforced. During this period South Africa was controlled by a White minority, with most Blacks, Indians and Coloureds excluded from the political sphere. This led to the oppression and exploitation of Black South Africans (Pretorius-Heuchert & Ahmed, 2003). Furthermore in the 1980's, as a result of the strict racial rules of Apartheid, political violence became prominent. Political violence can be understood as any act of destruction, which influences the power relations in society (Duncan & Van Niekerk, 2003). It includes detention without trial, social conflict, harassment, torture and murder of political rivals (Hamber & Lewis, 1997).

Political violence is a result of historically shaped structural deprivation and oppression of certain races, historical marginalisation of youth who struggled to attain a sustainable identity and who therefore joined gangs to fulfil this need, and the large difference in wealth and resources throughout South Africa (Friedland, 1999). Political violence has received enormous exposure in both literature and the media, however it is likely that in the past, some violent crimes may have been viewed as political violence (Hamber & Lewis, 1997). Furthermore those who commit crimes may feel that it is a method for solving problems (eg. poverty, political conflict) of

which Apartheid is to blame (Harris, 2002). As a result, even though political violence has declined since the abolition of Apartheid in 1994, its' legacy still plagues the lives of many South Africans (Schönteich & Louw, 2001).

In many peoples opinions crime has reached endemic proportions (Friedland, 1999). As a consequence, crime has increased the levels of fear, racism and prejudice in South Africa. It has also increased the need for security and has been attributed to the flux of emigration amongst qualified and sought after professionals. It is argued that the current levels of violent crime in South African society, will affect most, if not all South Africans in some way or another (Hamber & Lewis, 1997). This argument is supported by current research done in this area (Kopel & Friedman, 1997; MacRitchie, 2004; Ortlepp & Friedman, 2001).

2.2. DEFINING CRIMINAL VIOLENCE

It is thought that from the beginning of humanity violence has been a part of human experience (WHO, 2002). Today it has been found to be the leading cause of death world-wide for people between the ages of 15 to 44 (Krug *et al*, 2002). In South Africa it has become an endemic part of life (Baron, 1997).

Violence is defined as the intentional use of aggressive behaviour or power towards an individual or others. It can be threatened or actual physical abuse (eg. injury or murder), sexual abuse (eg. rape or sexual assault), or emotional abuse (ie. verbal attacks or threats). The aggressive behaviour is carried out by an individual or group of individuals against another, or others (Baron, 1997). It can result in injury, death, deprivation, mal-development and psychological harm (WHO, 2002). One of the major forms of violence in South Africa is criminal violence, which is the focus of this study.

The current study is based on the idea that criminal violence is an act of violence directed at an individual, that inflicts physical suffering or damage, violates the individual's freedom, and is a serious threat to normal human existence (Kopel & Friedman, 1997). Furthermore it is recognized as the most invasive form of violence in South Africa (Ortlepp & Friedman, 2001).

Violent crimes occur in the form of hijacking, domestic abuse, armed robbery, rape, sexual assault, assault with aggravated circumstances and murder; just to name a few (Hamber & Lewis, 1997). Criminal violence takes place for many different reasons such as financial gain, political convictions, power and/or feelings of displeasure (Kleber & Brom, 1992). Studies concerning criminal violence suggest that social inequality, poverty and deprivation caused by Apartheid appear to be the cause of much of this violent crime (Hamber & Lewis, 1997; Kopel & Friedman, 1997).

As a result of criminal violence becoming so common, Eagle (1998) argues that victims of violent crime deserve broader and deeper study as a traumatised population. In comparison to other traumatised populations such as survivors of war or natural disasters this population has received relatively little interest (Jacobs, 2002). It appears that reactions to criminal violence have remained relatively unexplored in the field of trauma (Friedland, 1999), however it is an area of great importance and concern as illustrated by the crime statistics discussed below.

2.3. CRIME STATISTICS

Many refer to South Africa as the crime capital of the world, however this has been disputed. One way of evaluating South Africa's crime levels is to compare crime statistics of selected countries (Nedbank ISS Crime Index, 2001). The World Health Organisation (WHO) (2002) discusses criminal violence with reference to homicide as this is the most suitable way to compare crime between countries. They stated that in 2000 an estimated 199 000 youth homicides occurred world-wide. The world report on violence and health published by the World Health Organization (2002) lists murder rates for 75 countries. According to this report South Africa is one of the most violent countries in the world with a homicide rate of 59 per 100 000, second only to Columbia whose homicide rate is 63 per 100 000 (WHO, 2002).

South African Police Services (SAPS) statistics support the notion that South Africa is a violent country (CIAC, 2000; 2001; 2002; 2003; 2004; 2005). These figures indicate that between April 2003 and March 2004 there were a total of 14 694 hijackings, 52 733 rapes, 19 824 murders, 30 076 attempted murders, 133 658 robberies with aggravating circumstances, 11 096 culpable homicides, 3 004 kidnappings, and 541 024 reported assaults in the Republic of South Africa (SAPS, 2005). It's important to

note that this is the overall crime statistics of this country and the crime rates are not uniform across South Africa, as different provinces and different communities experience different levels of different types of violent crimes (CIAC, 2005).

Although the crime rate is said to have decreased, this assumption may be due to the difficulty in measuring crime accurately (Schönteich & Louw, 2001). It is important to stress that South African Police records are the only official source of crime statistics in South Africa. For crime to make it onto the official police records two things need to happen. Firstly, victims or witnesses must report the incident to the police. Secondly, the police must record it in their records. This is not always the case as sometimes dockets go missing (either due to lack of interest in the case or corruption within the police force), victims often feel that it is useless to report the crime as nothing will be done about it (Wilson, 1998). Secondly crimes are often not reported due to it being such a common occurrence. As a result of these factors the incidence of violence may have been underestimated (Schönteich & Louw, 2001). Due to the high levels of crime as indicated by these statistics there is an agreement that criminal violence in the context of South Africa is normative rather than deviant (Hamber & Lewis, 1997; Harris, 2002; Ortlepp & Friedman, 2001).

2.4. CONSEQUENCES OF VIOLENT CRIMES

Although consider 'normative', accumulating evidence shows that criminal violence has unfavourable psychological consequences for victims (Davis & Friedman, 1985; Kopel & Friedman, 1997; Jacobs, 2002). The following quote summarises the above statement accurately "The deepest wound violent criminals inflict is not the path of a knife or the imprint of a hand, it is a psychological assault" (Smith, 2001, pp. 120-121). However, it is not only victims of violent crimes who suffer from unfavourable psychological symptoms. Research shows that those who have contact with the victims such as family, peers and trauma workers (eg. counsellors, psychologists, psychiatrists, emergency workers non-professional counsellors) often become secondary victims of traumatic events (Figley, 2003, McCann & Pearlman, 1990; Salston & Figley, 2003; Steed & Bicknell, 2001). The population of interest for the current study is trauma workers. This population will further be discussed.

2.5. TRAUMA WORKERS

Individuals become trauma workers as working with victims of trauma can be rewarding and enriching (Cerney, 1995; Figley, 2003; McCann & Pearlman, 1995; Stamm *et al.*, 2002). As Figley (1995) stated

The work of helping traumatized people is gratifying. Helpers discover early in their careers that those who are traumatized can be relieved by a caring professional who understands and respects their pain, can engender hope in recovering from it. (Figley, 1995, p.253)

As being a trauma worker is said to increase sensitivity and enhance empathy for the suffering victims it may lead to positive effects for the trauma worker such as a deeper sense of connection to others and an increased feelings of self-esteem from helping victims regain sense of wholeness and meaning in their lives (Cerney, 1995). It also gives them a more realistic view of the world. In other words they begin to realise that crime is a reality, and may become more aware of their surroundings and improve their safety. However despite their best efforts and good intentions, being a trauma worker may also lead to negative effects (ie. secondary traumatic stress) (Cerney, 1995).

Trauma workers are the population of interest for the current study as it is argued that they are at a greater risk of developing negative effects due to three reasons: 1) the relatively high levels of crime in South Africa create a situation in which survivors are more likely to be re-traumatized as well as there is a greater demand for debriefing/counselling/therapy; 2) trauma workers themselves may be at risk of being directly exposed to non-work related trauma; and 3) the trauma worker may feel helpless in protecting their clients and keeping them safe. All these factors impinge on the trauma workers state of mind and impact on their reactions to this type of work (Wilson, 1998). Due to the increased interest in psychology and the ill effects of criminal violence in South Africa this population is well justified.

2.5.1. Professional Versus non-professional trauma workers

A review of literature shows that those who help victims of natural disasters, accidents, and war have been extensively researched (Wilson, 1998). However, in comparison both professional and non-professionals trauma workers who support victims of violent crimes have received little attention (Figley, 1995; Salston & Figley, 2003). This is acknowledged by Figley (1995;2003;2004) who admits to the scant attention trauma workers have received in literature and the lack of studies that have been conducted with this sample (Adams, Boscarino & Figley, 2004; Figley, 1995; Salston & Figley, 2003). Figley (1995) stated that “therapist are vulnerable to experiencing stress as a result of their jobs, yet very few studies can identify the active ingredients that are most connected to this job/profession-related stress” (Figley, 1995, p. xiv). The lack of empirical studies concerning trauma workers indicates another gap in the trauma literature and the purpose for this research.

Trauma workers are those who work directly with trauma victims (Dutton & Rubinstein, 1995). In South Africa there are two types of trauma workers in the domain of criminal violence: professional trauma workers and non-professional trauma workers.

Professional trauma workers include psychologists, psychiatrists, counsellors and social workers. They have undergone intense training in the area of counselling and have received a formal qualification which is recognised by professional boards. They normally work in their own practice and see clients on a regular basis (Swartz & Gibson, 2003).

Current literature fails to provide a clear definition for a comprehensive understanding of non-professionals. Therefore in this study the term ‘non-professional’ refers to volunteer trauma workers that have no formal training or qualification in the field of psychology and that work on a part-time basis. They are also commonly referred to as lay counsellors or paraprofessionals (Swartz & Gibson, 2003). In South Africa the services provided by non-professionals have been in place for a number of decades in the organisational setting. This has been extended to other areas (eg. police sector) in order to cope with the increasing demand for debriefing of victims of violent crimes (Ortlepp & Friedman, 2001). This is due to the increased demand for counselling and

the shortage of professionally qualified counsellors (Marinus, 1997; Ortlepp & Friedman, 2001; Wilson, 1998). Non-professionals are considered important as they are more likely to be from the client's community, and speak the client's language (Marinus, 1997). Furthermore the majority of the population cannot afford professional counselling, therefore this type of trauma worker is more accessible and is able to provide an essential service for the masses. However they may find themselves performing tasks for which they received little relevant training and they may have to deal with unexpected and extreme events. Inappropriate training or skills can open the trauma worker to a range of psychological and emotional problems (Marinus, 1997).

It becomes apparent that non-professionals differ from professional therapists in many ways. Wilson (1998) states that firstly, non-professionals are often volunteers who are not paid for their services. Secondly, they usually work on a part-time basis, whereas professionals work on a full-time basis. Thirdly, non-professionals can work from a few hours a week to less than two shifts a month depending on how much they want to commit. On the other hand professional's workers counsel on a daily basis. Lastly, they also differ in terms of their training. Anybody who deals with victims of crime requires some sort of training. Non-professional's usually only receive short-term training in the field which they work, while professional require a formal qualification in psychology or social work (Wilson, 1998).

In the past it was argued that introducing non-professionals would lower the standards of help offered to victims. However studies have shown that with or without training, clients of non-professionals did as well or sometimes even better than those of professionals (Marinus, 1997; Munroe *et al*, 1995, Ortlepp & Friedman, 2001; Wilson, 1998). Studies that have compared the effectiveness of non-professionals found that they produce better results than professional in terms of the client's perceptions of the effectiveness of the counselling process. This was attributed to energy, enthusiasm and involvement displayed by the non-professional counsellors (Ortlepp, 1998).

Non-professionals are also criticised as there appears to be no regulation or monitoring of their services. This raises several concerns such as the type of help they

are giving, the type of support they are receiving and the effects of their work on themselves and their clients. Another major concern using this population is their lack of knowledge of theory and techniques. This in turn leads to the question as to how well they cope and the type of service they provide. Despite these worries some authors feel that adequate training and supervision can be a helpful way in dealing with these concerns (Marinus, 1997).

Although issues are often raised concerning non-professionals, very few studies in comparison to professional trauma workers and other populations have been conducted. Stamm (1997) states that studies with emergency service personnel (eg. fire-fighters, paramedics, and police officers) are the best documented in the area of secondary traumatic stress (Beaton & Murphy, 1995; Kopel & Friedman, 1997). In addition leading authors such as Figley and Kleber (1995) have only reviewed secondary traumatic stress in three groups of workers- colleagues in high-risk occupations (eg. banks); crisis workers (eg. police) and helping professionals (eg. therapists). Furthermore others such as Pearlman and Saakvitne (1995) have focused mainly on therapists, although they do believe that vicarious traumatisation extends to all trauma workers (Pearlman & Saakvitne, 1995). In contrast to these studies, only a few publications exist focusing on non-professionals trauma workers (Ortlepp & Friedman, 2001; Wilson, 1998). Therefore this study includes both professionals and non-professionals to compensate for the lack of research done with both populations.

2.5.2. Consequences of Trauma Work

The physical, emotional and cognitive consequences of directly helping victims of violent crimes can produce what is termed secondary traumatic stress (Stamm, 1997; Steed & Bicknell, 2001; Salston & Figley, 2003). Yet, research in this area shows that there is a lack of empirical evidence concerning the incidence and prevalence of this type of stress reaction (Figley, 2003). Furthermore, although there has been research into secondary traumatic stress in South Africa, in contrast to posttraumatic stress disorder, these studies are limited. Due to the levels of violence in South African society, trauma workers have been more in demand than ever. Thus the commonness of this type of violence has made it essential for understanding the consequence of working with these clients (Campbell-Arthur, 2002). Due to the lack of research, the importance of trauma workers, and the high rates of crime in South Africa; the present

study aims at broadening understanding and contributing new findings to the field of secondary traumatic stress research.

2.5.3. Research regarding trauma workers

Studies regarding trauma workers have indicated that very few trauma workers are satisfactorily trained to respond to personal emotional problems in the aftermath of traumatic events (Beaton & Murphy, 1995). Due to minimum qualifications and the fact that non-professionals work part-time in this field it is assumed that they are more likely to develop secondary traumatic stress. In contrast, professionals due to their qualifications and greater supervision should be less prone to developing secondary traumatic stress. A study conducted by Rudolph, Stamm and Stamm (1997) demonstrating the existence of compassion fatigue in mental healthcare providers found that those who were more qualified were at lower risk of experiencing compassion fatigue (Steed & Bicknell, 2001). However, other studies have shown that working in the field of trauma on a full-time basis may make them more susceptible in developing secondary traumatic stress (Munroe *et al*, 1995, Ortlepp, 1998).

Dyregrov, Kristofferson and Gjestad (1996) compared reactions of voluntary and professional helpers in a traumatic situation. The results of their study showed that voluntary and professional helpers experience similar reactions during and after their involvement. However the level of reaction was higher in the volunteers who reported more intrusion and avoidance symptoms of PTSD than professional helpers. The authors suggested that these findings were due to professionals having more professional social support. They also noted that volunteer helpers indicated that their life had changed meaning following the disaster. This finding parallels those of Figley (1995) and Dutton and Rubinstein (1995) (Wilson, 1998).

Research conducted by Munroe (1991) showed that the development of secondary traumatic stress is not protected by level of experience or qualification of the trauma worker (Munroe *et al*, 1995). Furthermore Wilson (1998) conducted a qualitative study which looked at secondary traumatic stress in trauma counsellors (both professional and non-professional) in South Africa. Results of this study showed that both groups suffered from compassion fatigue. Subjects from both groups indicated

feelings of helplessness, powerlessness and a sense of alienation from others (Wilson, 1998). These conflicting results show a need for further research.

2.6. CONCLUDING COMMENTS

The purpose of this chapter was to provide insight into the nature of South African society and to illustrate the need for research in this area. What is evident is that due to South Africa's political past, and the social and economical situation of the present, 'normal' society in South Africa is not separated from criminal violence. Therefore

This chapter further explored the crime rate in South Africa and how, although it has said to have decreased, it may have been underestimated. Therefore violent crime will affect the majority of the population directly and/or indirectly. In addition, the incidence of crime is linked to the escalating cases of trauma which has severe consequences for all involved- those who have been direct victims of crime, those who are close to the victim, and those who help them deal with the trauma. Thus this chapter highlights the need for trauma workers in South Africa as they are an important resource due to the violent nature of South African society and relatively high levels of crimes. It also stresses the importance of studying violent crimes in relation to trauma, especially for providing a relevant contribution to South African literature. A limitation which becomes apparent is that there is a great need for empirical research with regards to trauma workers and secondary traumatic stress. Although there is a greater need for research into the effects of being a non-professional, in comparison to other types of helpers professional trauma workers have also received little attention. Therefore this study includes all levels of trauma workers who work with victims of violent crimes so as to be inclusive, more applicable to the South African context, and to extend research in this area.

In order to understand the negative effects that the trauma worker experiences as a result of working with trauma victims, it is important to conceptualise trauma as well as to provide a brief understanding of the experiences of those directly exposed to violent crime (ie. PTSD). The following chapter will provide a brief summary of trauma and PTSD as an introduction to Secondary Traumatic Stress. This is followed by a more in-depth understanding of secondary traumatic stress.

CHAPTER THREE:
CONCEPTUALISATION OF TRAUMA- POSTTRAUMATIC STRESS
DISORDER AND SECONDARY TRAUMATIC STRESS

3.1. INTRODUCTION

‘Trauma’ is derived from the Greek word meaning ‘injury’ (Cerney, 1995). The term ‘trauma’ was first used in medicine, however it was later adapted to psychology as psychological trauma was said to share a defining feature with medical trauma. This defining feature according to Janoff-Bulman (1992) is that psychological trauma may also be viewed as “.... a violent shock, the idea of a wound and the idea of consequences affecting the whole organism” (Janoff-Bulman, 1992, p.50).

Today, in the field of psychology, the word trauma is generally used to include reactions to both natural catastrophes (eg. hurricanes or earthquakes), and man-made violence (eg. war or criminal victimisation) (Matsakis, 1994). However the exact constituents of trauma are difficult to identify as not everybody reacts to trauma 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 respond 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). Although the term trauma is widely used in psychology, due to this subjectivity, it has not always been easily definable (Cerney, 1995). Over the years trauma has shifted in conceptual understanding from Freud’s (1928) initial conception to the current formulation in the DSM-IV-TR (APA, 2000; Jacobs, 2002).

3.2. UNDERSTANDINGS OF TRAUMA- POSTTRAUMATIC STRESS
DISORDER

Freud (1928) conceived trauma as involving an external stressor event which overwhelms normal ego functioning. According to Freud a traumatic stressor would cause the protective shell around the ego to break down, which would leave the ego vulnerable to neurosis. Freud’s (1928) views on trauma such as its ability to alter the ego state and change adaptive behaviour, anticipated current views on trauma and made a major contribution to the field of posttraumatic stress disorder (Wilson, 1994)

Today the 'Diagnostic and Statistical Manual (DSM-IV-TR)' of the American Psychiatric Association is used and accepted widely as a method for diagnosing psychological disorders. The DSM-IV-TR states that trauma can occur both directly and indirectly (APA, 2000).

The DSM-IV-TR (2000) defines direct exposure to trauma as:

A situation in which the person experienced, witnessed, 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 (to the event) involved intense fear, helplessness or horror. (APA, 2000, p.424)

This highlights the person's response as central to the diagnosis.

Trauma that occurs indirectly is defined as:

Learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate. (APA, 2000, p.424)

Mendelsohn (2002) and MacRitchie (2004) have both argued that indirect exposure to trauma may also occur via media exposure such as the news, newspaper articles and so on (MacRitchie, 2004; Mendelsohn, 2002).

As acts of violence are comprised of traumatic stressors it becomes evident that victims of crime and those who are exposed indirectly to violent crime, are at risk of developing PTS symptomology (Carlson & Dutton, 2003). The existence of PTSD has assisted in validating and accepting the suffering of those victimized by stressful life events. The words 'post-traumatic' means 'after injury', and specifically that there is a change in state of well-being which is related to a variety of symptom formation (Wilson, 1994). Interest in PTSD came about during the First World War, although it was then referred to as shell-shock. The existence of PTSD was only finally

recognized in the Diagnostic and Statistical Manual (DSM-III) of the American Psychiatric Association in 1980. Since then it has been expanded throughout further editions of the DSM, the latest being the DSM-IV-TR (Baldwin, 2004).

Often confused with PTSD is Acute Stress Disorder (ASD). ASD is a relatively new category of anxiety disorder introduced by the DSM-IV. It is a consequence of exposure to a traumatic stressor that results in dissociation, reliving the experience and attempts to avoid reminders of the event. The diagnostic criteria for ASD is very similar to that of PTSD as they both require an extreme stressor. However they differ in terms of onset, ASD occurs within four weeks and lasts between two to twenty eight days, whereas PTSD can occur at any time and lasts longer than a month. An individual who receives a diagnosis of ASD is likely to receive a diagnosis of PTSD if the symptoms persist for more than four weeks (Sue, Sue & Sue, 2003).

Subject to enough stress any human has the potential for developing stress symptoms, however to receive the diagnosis of PTSD these symptoms must be present for at least a month after the traumatic event and must cause a significant disruption to social, occupational and/or other important areas of functioning (APA, 2000).

Baldwin (1996) argued that PTSD symptoms are adaptive, 'normal', and have evolved to help us recognize and avoid other dangerous situations quickly. In addition not everyone who experiences a traumatic event will develop PTSD (Baldwin, 2004). Most people who are exposed to a traumatic stressful event may experience some of the symptoms of PTSD in the days and weeks following exposure, but these symptoms generally decrease over time and eventually disappear. However, about 8% of men and 20% of women exposed to a traumatic event go on to develop PTSD, and roughly 30% of these individuals develop a chronic form that persists throughout their lifetimes (Matsakis, 1994).

The level of violent crime in South Africa suggests that South Africans will probably exhibit high levels of PTSD as the traumatised individual remains engrossed in a dangerous, violent, and unsafe environment (Carlson & Dutton, 2003). In terms of South African literature on trauma there has been a great interest in research on the

effects of trauma with both adult and child populations (Bronzin, 1996). However there appears to be a lack of research in the area of criminal violence.

3.2.1. Studies on Criminal Violence and PTSD

Fitzpatrick and Wilson (1999) looked at exposure to violence and PTS symptomology among 71 clinical workers. Their study found that there is a link between exposure to violence and the psychological consequences of PTSD. They also found that participants who examined the more chronic aspects of violence reported greater symptoms of PTSD (Fitzpatrick & Wilson, 1999).

Research done by Breslau and Davis (1991) indicated that PTSD seems to be one of the most common outcomes to a traumatically stressful incident such as criminal violence. Victims of crime seem to suffer from similar symptoms as other trauma survivors, these include intrusions and hyperarousal (Kopel & Friedman, 1997).

Esprey (1996) studied the individual effects as a result of exposure to violence in a sample of blacks living in townships. She found that being a victim of violent crime resulted in the high occurrence of PTS symptomology among the sample (Esprey, 1996). This was also similar to a study conducted by Brozin (1996) who found that in violence-stricken communities in South Africa, there was an increased incidence of PTSD. Brozin (1996) concluded that if the problem of violence in South Africa is not addressed, the youth of South Africa may be prevented from reaching their potential which in turn impacts the potential for the future of this country (Bronzin, 1996). The association between high levels of violence and increased levels of PTSD are further supported by several South African studies (Jacobs, 2002; MacRitchie, 2004; Mendelsohn, 2002).

These studies are relevant to the present study as they look at the link between trauma and criminal violence. They also provide empirical support for the association between high levels of violence and increased levels of PTSD. As a result of these studies it's evident that this population needs counselling in order to ameliorate these symptoms. It will also later become obvious that in dealing with victims of crime that display symptoms of PTSD, trauma workers are at risk of developing similar symptoms. PTS symptomology will be discussed further as an understanding of these

symptoms is important for a better understanding of the focus of this study- secondary traumatic stress.

3.2.2. Posttraumatic Stress Symptomatology

PTSD is characterized by a constellation of symptoms that can arise when an individual is exposed to a traumatic stressor. These symptoms are clustered into three criteria: intrusions, avoidance, and hyperarousal (Taylor, Kuch, Koch, Crockett & Passey 1998). The actual symptoms are described in the Diagnostic and Statistical Manual of Mental Disorders (APA, 2000).

The first criteria for PTSD are intrusions. Intrusions involve re-experiencing of the traumatic event and occur in different ways (Kaplan, Sadock & Grebb, 1994). Re-experiencing is different from a memory of a traumatic event because the images, thoughts, or perceptions feel as if they are real and are as disturbing as the actual event. Common ways in which they are relived include: reoccurring dreams of the incident, hallucinations, flashbacks, deep psychological suffering, and/or physiological reaction to the exposure of an internal or external reminders that represent or are similar to a part of the traumatic event (such as sweating, rapid heart beat etc.) (APA, 2000). A study conducted by Laufer (1985) showed that any exposure to violence is directly related to symptoms of intrusion (Kopel & Friedman, 1997). Kilpatrick and Resnick (1993) conducted a literature review of studies of criminal victimisation. They found that intrusive thoughts and the re-experiences of exposure to criminal violence was a highly common response to those exposed to violent crime (Kilpatrick & Resnick, 1993). This is further supported by research conducted by MacRitchie (2004) which looked at the relationship between PTS symptomology and criminal violence with regards to a sample of South African university students. Results of this study showed that intrusion scores appeared to be the highest among the sample (MacRitchie, 2004).

The second criteria for PTSD are symptoms of avoidance. Avoidance occurs as victims make an unconscious effort to avoid thoughts or feelings that remind them of the trauma. They may stop participating in activities that they once enjoyed. This may lead to detachment and isolation from others or avoid places that may remind them of the event (Kaplan *et al*, 1994). In a study conducted on symptoms of avoidance,

Horowitz (1986) found that they are mechanisms for controlling the amount of exposure to trauma-related stimuli. Avoidance seems to be regulated by planned processes and is an active way of avoiding symptoms such as intrusions, flashbacks and so on (Taylor *et al*, 1998). Kilpatrick and Resnick (1993) found that those who have been exposed to criminal victimisation do not always show symptoms of avoidance, but argue that sometimes certain avoidance behaviours are evident depending on the type of crime in which the victim has been exposed (Kilpatrick & Resnick, 1993).

The last criteria for PTSD is hyperarousal. Hyperarousal symptoms concern symptoms of increased physical alertness. These symptoms may go on for days, weeks or even months (Matsakis, 1994). Hyperarousal symptoms include hypervigilance (exaggerated startle response), insomnia and other sleep disturbances, lack of concentration, irritability, extreme mood swings, and/or outbursts of anger (APA, 1994). Bard and Sangrey (1986) found that hypervigilance is a normal response to criminal victimisation, as victims anticipate that they will be a victim of another crime (Jacobs, 2000). Studies have shown that there is a presence of hyperarousal symptoms in those who have been assaulted (Kilpatrick & Resnick, 1993).

Other symptoms of PTSD include depression, grief and loss, helplessness, guilt and fear of the traumatic event recurring. Individuals often experience a number of these symptoms together. They generally appear shortly after the trauma, however, some victims may be symptom-free for many weeks or months before symptoms begin to surface (Matsakis, 1994). Research conducted by Lauterbach and Vrana (2001) showed that PTS symptoms are higher in people who experience multiple traumatic events. Furthermore research literature is in agreement that PTS symptoms are strongly affected by the intensity of the trauma, and differ in their impact on the individual (Lauterbach & Vrana, 2001).

A review of trauma literature revealed that despite the high levels of stress and violent crimes in South Africa, little research has been conducted in this area (Esprey, 1996; Friedland, 1999; MacRitchie, 2004). Furthermore Figley (1995) argues that the number of victims of violent crimes are greatly underestimated because only those

directly in harm's way are counted, excluding others such as the victims friends, counsellor, and/or family members (Figley, 1995).

In addition despite the fact that classifications of what constitutes a traumatic event (as described in the DSM-IV-TR description of PTSD) suggests that even knowledge of a traumatic event can be traumatising, it fails to further elaborate on this (Figley, 1995). As a result of this limitation authors such as Figley (1995); Kleber (1995), and Stamm (1995), have elaborated on the DSM-IV-TR definition of PTSD. They have emphasised that in learning about unexpected or violent death or injury experienced by a family member or other close associate indicates that individuals can be traumatised without actually being physically harmed or threatened. Instead they can simply be traumatised by learning about the traumatic event (Figley, 1995; Pearlman & Saakvitne, 1995; Steed & Bicknell, 2001). Furthermore Figley (1995) argues that those directly and indirectly exposed to trauma retain the same set of symptoms, therefore those who experience trauma indirectly should also experience similar implications as those who experience it directly (Figley, 1995). Indirect exposure is the least studied and understood aspect of traumatic stress. This will be further discussed, with specific focus on the experiences of the trauma worker.

3.3. INDIRECT TRAUMATISATION: THE NATURE OF SECONDARY TRAUMATIC STRESS

As previously stated, in South Africa, trauma workers work within a specific context and live in a country where violence is an everyday occurrence (Durrant, 1999; Hamber & Lewis, 1997). Due to the brutal and cruel nature of criminal violence any contact with this traumatic material (ie. witnessing or hearing the event) can have adverse effects on an individual (Munroe *et al*, 1995). Individuals who are affected this way can include witnesses, family members, journalists, or helpers (eg. psychologists, debriefers, lay workers, and/or counsellors). It is also important to stress that secondary traumatisation may occur through identification with others, who although may not be closely related to the individual, may be related through common social context (eg. work environment or geographical location) (Blumberg, 2000). As Remer and Ferguson (1995) stated "victimization has a ripple effect, spreading the damage in waves out from victims to all those with whom they have intimate contact" (Cited in Creamer & Liddle, 2005, p.89).

Secondary traumatic stress occurs when an individual is indirectly exposed to trauma through a personal description or narrative of a traumatic experience (Zimering *et al*, 2003). It is defined as

the natural consequent behaviours and emotions resulting from knowledge about a traumatising event experienced by a significant other- it is the stress resulting from helping or wanting to help a traumatised or suffering person. (Figley, 1995, p.10).

With regards to Figley's (1995) theory of secondary traumatic stress, it is maintained that individuals such as trauma workers are particularly at risk for this type of stress, as they work in direct contact and on an ongoing basis with victims of violent crimes. Figley (1995) stated that "people can be traumatised without actually being physically harmed or threatened with harm" (Figley, 1995, p.4). Both the vivid re-counting of the trauma experienced by the victim and the trauma workers' subsequent cognitive or emotional interpretation of that event may result in symptoms similar to or associated with PTSD (eg. hyperarousal, intrusive symptoms, avoidance, and/or anxiety) (Baldwin, 2005; Davis & Friedman, 1985; Rudolph, Stamm & Stamm, 1997; Zimering *et al*, 2003).

When working with victims of violent crime trauma workers often experience strong reactions to hearing violent and vivid narratives. Thus as a result of trauma work Cerney (1995) states that "they experience a change in their interaction with the world, themselves and their families. They may begin to have intrusive thoughts, nightmares and generalised anxiety" (Cerney, 1995, p.137). To protect themselves they may dissociate to some degree, distance themselves from others, become overwhelmed with helplessness or become emotionally numb (Salston & Figley, 2003).

Figley (1995) explains that the diagnostic criteria for PTSD are nearly identical to that of secondary traumatic stress disorder. The only difference is one occurs directly while the other occurs indirectly (Figley, 1995). Similar to PTSD, Figley's (1995) research shows that intrusions, avoidance and hyperarousal are also experienced by

'helpers' (Steed & Bicknell, 2001). For example with regards to intrusions Figley (1995) suggests that similar to PTSD the individual re-experiences, in fantasy, the traumatic event that occurred to the victim (Figley, 1995). His research further supports that of Munroe (1991) who studied therapists and found they suffered from intrusion and withdrawal symptoms similar to their combat PTSD clients (Munroe *et al.*, 1995).

It is often asked why the term secondary traumatic stress is employed rather than simply referring to indirect traumatisation or PTSD. The concept of 'secondary' was derived from Bolin (1985) who labelled people who interacted with primary victims, secondary victims of trauma (Marinus, 1997). Figley (1995) adopted the term 'Secondary Traumatic Stress' to replace indirect trauma as it more accurately represented the reactions of supporters/helpers of those experiencing PTSD (Figley, 1995). In addition, he stated that the term indirect traumatisation would more accurately refer to family members or friends of the direct victims. Furthermore based on the reasoning that the significant difference between secondary traumatic stress and PTSD is in terms of occurrence (secondary traumatic stress follows PTSD) and that by definition both occur 'post' to an event, Figley (1995) suggests that the term is mislabelled and should rather be 'primary traumatic stress disorder' (Figley, 1995).

Despite agreement to the term secondary traumatic stress, various authors in the field of secondary traumatisation refer to a broad variety of names (Stamm, 1997). After an extensive review of the current literature, Stamm (1997) stated that "the great controversy about secondary trauma is not, can it happen, but what shall we call it?" (Steed & Bicknell, 2001, p.1). She concluded that there is no consistently used term regarding the impact of being exposed to traumatic material as a consequence of being a therapist (Steed & Bicknell, 2001). Current literature reflects the use of various terms that are or are nearly synonymous with secondary traumatic stress. These include: "compassion fatigue" (Figley, 1995); "countertransference" (McCann & Pearlman, 1990); "burnout" (Maslach & Jackson, 1981); and "vicarious traumatisation" (McCann & Pearlman, 1989; Pearlman & Saakvitne, 1995; Stamm, 1997). It will become evident throughout this study that these terms have different meanings, and that many of these concepts are unsatisfactory in addressing their specific features and are often used in the wrong context (Dutton & Rubinstein,

1995). Furthermore the term secondary traumatic stress will be used in the current study as it is argued that perhaps it is the most inclusive (Stamm, 1997), and extends beyond the context of therapy to occur in all caring situations (Figley, 1995). Secondary traumatic stress is a broad term that encompasses a variety of individuals that can be affected (eg. journalists, health care workers, insurance workers etc.). Two terms that fall under secondary traumatic stress that are more specific to trauma workers are compassion fatigue and vicarious traumatisation. The following paragraphs will underline the similarities and differences between these two main constituents of secondary traumatic stress.

3.3.1. Compassion Fatigue

In literature the concept of compassion fatigue emerged in 1992 when Joinson introduced it in a nursing magazine (Figley, 1995). However in 1995, Figley, a leading author in the field of secondary trauma, presented the concept of compassion fatigue as a natural, yet damaging consequence of working with traumatised clients. Since then compassion fatigue has become a growing concept in the field of trauma, and is often used interchangeably with secondary traumatic stress (Figley, 2003). It does nevertheless reflect a particular focus on the impact of counselling or working with trauma survivors. Hence it specifically elaborates on the notion of secondary traumatic stress in relation to counsellors and other health care workers.

Figley's (1995) work on compassion fatigue came about in relation to PTSD and the recognition that therapists seem to experience symptomatology similar to that experienced by their clients who suffered from PTSD (Steed & Bicknell, 2001). Figley (1995) looked at the major distinction between the patterns of response, during and after exposure to a traumatic event, for both primary and secondary victims (Figley, 1995). His concept of compassion fatigue developed as he began to focus on the unique environment of trauma workers and mental health professionals and how they seemed to experience the effects of trauma vicariously (Rudolph *et al*, 1997). He claimed that knowing individuals who are traumatised is the systematic connector that links the traumatic feeling and emotions of the primary and secondary victims. Secondary victims, unfortunately, are the ones who attempt to alleviate the pain and suffering of the primary victims, and in so doing become a victim themselves (Wilson, 1998).

Research conducted by Beaton and Murphy (1995) showed that emergency and crisis workers may take on board the traumatic stress of those they help. This puts them at risk for compassion fatigue. They also found that the cost of not attending to the problems of compassion fatigue puts these workers at risk of short-term and long-term physical and emotional disorders, strains on interpersonal relationships and shortened careers (Beaton & Murphy, 1995). This is consistent with the findings of McCammon and Jackson's (1995) work on emergency medical professionals (Figley, 2003).

Figley (1995; 2003) stated that outside the natural consequences of therapeutic engagement there appear to be four additional reasons as to why trauma workers are at risk of compassion fatigue. These are empathy, trauma history, unresolved trauma, and children's trauma (Figley, 1995; Figley, 2003).

Empathy- From recognizing the parallel effect of symptoms from client to therapist Figley (1995) argued that "those who have enormous capacity for feeling and expressing empathy tend to be more at risk of compassion stress" (Figley, 1995, p.1). Empathy is discussed further in Chapter Four.

Trauma history- An individual does not exist in a vacuum. He/she may have a trauma history of his/her own (Munroe *et al*, 1995). Therefore they might work with a client who has experienced a similar traumatic experience as them. Thus there is a danger of the trauma worker over generalizing their experiences and methods of coping to the client and over encouraging similar (though possibly inappropriate) resources (Figley, 1995). However a trauma history should not be seen as a disadvantage to the trauma workers ability to function or as vulnerability in developing secondary traumatic stress. Having been a victim themselves can be an advantage in understanding their clients and being able to model healing. On the other hand if their traumatic incident went unacknowledged or unresolved it appears that secondary traumatic stress may be intensified (Munroe *et al*, 1995).

Unresolved trauma- Trauma workers who are survivors of previous trauma may have unresolved trauma. This may be provoked during the counselling relationship (Figley,

1995). In addition, due to the range of violent crimes in which trauma workers are exposed, it is inevitable that they will counsel traumatized clients who have experienced events similar to those that they have experienced. Any unresolved trauma that the trauma worker may have may also be triggered by reports of similar trauma in clients (Figley, 1995).

Children's trauma- Working with children is also challenging for trauma workers. Furthermore, Figley recognized that persons who are exposed to traumatized children are especially vulnerable to compassion fatigue (Figley, 1995).

Another term that is used in the context of secondary traumatic stress is vicarious traumatization. This concept represents a further enhancement in the understanding of secondary traumatic stress (Blumberg, 2000) and is important in contextualising the consequence of trauma work (Stamm, 1997). Whereas compassion fatigue is more practically applied, it will become evident that vicarious traumatization is more extended on in theory.

3.3.2. Vicarious Traumatization

McCann and Pearlman's (1990) concept of vicarious traumatization focuses specifically on trauma workers and is based on a Constructivist Self-Development Theory. Thus its' emphasis is on the role of meaning and adaptation, rather than focusing mainly on a collection of symptoms (Steed & Bicknell, 2001). The underlying basis of this theory is that human beings construct their own personal realities through the development of complex cognitive structures which are used to interpret events. Furthermore these cognitive structures evolve and become more complex over the lifespan due to individual's interaction with their environment (McCann & Pearlman, 1990; Steed & Bicknell, 2001).

Vicarious traumatization is defined by Pearlman and Saakvitne (1995) as the transformation in the trauma worker's inner experience resulting from doing therapeutic work with trauma clients. It results from an empathetic engagement with trauma survivors. Their research showed that there are a number of common changes that occur frequently among trauma workers and their clients. These changes were considered not pathological, as described for secondary traumatic stress, but normal

cognitive and emotional changes (Baldwin, 2005). However, these changes may be disruptive or painful and can persist for months or years after work with the traumatised person has ceased (McCann & Pearlman, 1990).

Rosenbloom, Pratt and Pearlman (1995) identify the following features of vicarious traumatisation effects: (1) repeated exposure to trauma material may strengthen the gradual change in beliefs; (2) they are intrusive and painful; (3) they are changeable as they can be minimised or ameliorated; and (4) they may be permanent with regards to how one sees the world and oneself (McCann & Pearlman, 1990).

In order to accurately describe secondary trauma in South Africa, and to provide more depth to this study, it is necessary to discuss the cognitive processing theory as it accounts for the individual, cultural and environmental dynamics.

3.3.2.1. Constructivist Self-Development Theory

Recent literature recognises the important role that cognitive responses play in understanding both the victim and trauma workers' experiences of traumatic events (Friedland, 1999). The role of cognitive variables such as attitudes, expectations, beliefs and assumptions about the world are seen as significant in understanding human behaviour and therefore important aspects of trauma (Figley, 2001).

Constructivist Self-Development Theory integrates psychoanalytic theories with cognitive theories to provide a useful theoretical perspective for understanding the origins for conceptualising the influence of trauma work on the helper (Steed & Bicknell, 2001). It emphasizes the individual nature of trauma and outlines the different characteristics of personality that are affected by trauma (such as self-capacities, ego resources, psychological needs and related cognitive schemas, and frame of reference). These characteristics are sensitive to disruption by secondary trauma and can cause minor and/or severe effects, depending on variations between the client's traumatic memories and the trauma worker's existing schemas. Alterations to schemata based on trauma adaptation needs are reflected in the trauma worker's viewpoints (McCann & Pearlman, 1992).

McCann & Pearlman (1990) also argue that these and other cognitive shifts that result from exposure to traumatic client material may create emotional distress in trauma workers (eg. anger, guilt, fear, irritability, inability to contain intense emotions). In addition, Dutton (1994) asserts that the cognitive shifts may interfere with effective functioning in the therapeutic role. Dutton (1994) claims that trauma workers may develop some of the following views: the world is not a safe place; they are helpless; freedom is restricted; or working with victims sets one apart from others (Dutton, Burghardt, Perrin, Chrestman & Halle, 1994).

Although cognitive shifts may occur when working with trauma victims, Pearlman (1995) stresses that this interaction need not always result in negative shifts of cognitive schemata. Trauma work can be positive as it encourages personal growth, a deeper connection with others, and it is the experience of cumulating a better understanding of all aspects of life (Ortlepp, 1998).

In this study it is suggested that ongoing exposure to traumatic material can disturb the trauma workers central needs resulting in a disruption of cognitive schemata. These central needs are as follows:

(i) Safety

McCann and Pearlman (1990) claim that the illusion of safety is important in maintaining a positive attitude towards life and allows a sense of security. However working with victims of crime, can result in a heightened sense of vulnerability and increase awareness of the fragility of life. Trauma workers may also feel the need to take precautions against acts of violence- especially when dealing with victims of rape (McCann & Pearlman, 1990). Although South Africans are aware that crimes are common, the belief that “it can’t happen to me” still exists. When a trauma worker becomes involved with victims of crime their feeling of invulnerability may be destroyed, resulting in feelings of insecurity and lack of safety in the world (Kleber & Brom, 1992).

(ii) Trust

Trust refers to the need to rely on ones own judgment and the expectancy that others will meet one’s needs. However, it is crucial that one does not trust completely and

learn to integrate trust and distrust with regards to others and self (McCann & Pearlman, 1990). Those working with victims of trauma are exposed to the countless cruel ways that individuals deceive, betray or violate the trust of others. This may disrupt the trauma workers schemas about trust making them sceptical of the motives of others (McCann & Pearlman, 1990; Munroe *et al*, 1995).

(iii) Esteem

Everybody has a need to believe others are kind and worthy of respect. Acts of violence may lead to a victim having diminished esteem for others and themselves. In turn trauma workers may also find that they lose respect for other people, they may start to feel angry, pessimistic and bitter towards others (McCann & Pearlman, 1990). Furthermore, trauma workers start the helping relationship feeling powerful, resourceful, and capable with coping with all demands that they face. If these expectations are not met feelings of personal failure and inadequacy are formed (ie. loss of self-esteem) (Davidson, 2001).

(iv) Intimacy

Intimacy refers to belonging and connecting with others. This need is central to psychological health (McCann & Pearlman, 1990). However when exposed to violent crimes individuals' often experience alienation from others and the world (Davidson, 2001). Furthermore trauma workers may also feel a sense of alienation due to being exposed to terrifying imagery and the reality of the world (McCann & Pearlman, 1990).

(v) Power

A central theme in trauma literature is power (McCann & Pearlman, 1990). Power refers to the need to regulate one's feelings and behaviours and to manage others. Exposure to criminal victimization makes one aware of the illusory nature of power. When indirectly exposed to criminal violence, the trauma worker's memory may stir up concerns about their own sense of power in the world. In extreme cases, trauma workers may find themselves experiencing depression or anguish about the unpredictability of the world (McCann & Pearlman, 1990).

(vi) Independence

Independence refers to the need to control one's behaviour and destiny. Trauma victims, especially those of violence, often experience a disruption in their independence such as restriction in their freedom of movement and a diminishment in their personal autonomy (McCann & Pearlman, 1990). For a trauma worker with strong independence needs, identification with clients who have lost their sense of independence can be painful and damaging (Wilson, 1998).

(vii) Frame of Reference

Frame of reference is an individual's framework for understanding him/herself and the world, and includes aspects such as the notion of causality, world view, moral principles and beliefs about locus of control (Friedland, 1999). Experiencing a violent crime alters an individual's frame of reference; this in turn may shift schemas about the individual's beliefs about the world (Davidson, 2001). Traumatized individuals often ask the question 'why me?'. Likewise, trauma workers may try to understand why their client was a victim of violence. If this becomes negative it may take the shape of victim-blaming (McCann & Pearlman, 1990).

Several studies have looked at the effects of vicarious traumatization in relation to criminal violence. In a study that looked at the effects of 90 individuals with regards to direct and indirect exposure to criminal violence in South Africa, Friedland (1999) found that 36% of those exposed indirectly to violence appeared to be suffering from vicarious traumatization. Results indicated that those exposed to indirect criminal violence experienced significant disruptions in the belief of other safety and in other esteem. She suggested that this finding indicates that criminal violence leads to feelings of vulnerability and concern about the safety of others, as well as negative perceptions of other people and the world in general. As she also looked at direct victims her findings further indicated that indirect exposure to trauma produced similar effects to direct exposure (Friedland, 1999).

In a South African study based on a similar group of both directly and indirectly traumatized students, Blumberg (2000) identified that cognitive disruptions occurred, in both indirect and direct groups, with self-control, other trust and other control. These disruptions reflect a sense of not being able to control one's feelings and actions

and a lack in trust in others (Blumberg, 2000). Similarly, Davidson (2001) study on the effects of being an emergency care practitioner in South Africa showed high levels of disruptions in cognitive schemata, with other safety and other trust being the most effected (Davidson, 2001). These studies provide support for cognitive theories, which link to the development of secondary traumatic stress.

In summary compassion fatigue can emerge suddenly and with little warning. It appears that those who work with traumatized people and who are empathetic are at greater risk of compassion fatigue. Compassion fatigue seems to refer to symptomology of secondary traumatic stress.

Vicarious traumatisation is cognitive in nature. By listening to their clients accounts of victimisation, trauma workers may internalise the memories and have their own cognitive schemes temporarily or permanently disrupted. These disruptions can become intrusive to the trauma workers psychological well-being and interpersonal functioning (Wilson, 1998). Despite the clear distinction between vicarious traumatisation and compassion fatigue these terms are often used interchangeably which creates a great deal of confusion.

3.4. CONCEPTUALISING SECONDARY TRAUMATIC STRESS

Figley (1995) uses the terms compassion fatigue, compassion stress¹ and secondary traumatic stress synonymously. He argues that both compassion stress and compassion fatigue can be used interchangeably for those who feel uncomfortable with secondary traumatic stress, as the latter term is often perceived to be offensive in that it is perceived to indicate some sort of pathology (Figley, 1995). Furthermore other specialists in the field of trauma often use the terms secondary traumatic stress, vicarious traumatisation and compassion fatigue, interchangeably with reference to their studies and theories (Figley, 1995).

Pearlman and associates (1990) are clear that vicarious traumatisation differs conceptually from compassion fatigue and secondary traumatic stress in their emphasis, context and focus. They argue that secondary traumatic stress and

¹ Compassion stress refers to the stress due to helping or wanting to help a trauma victims

compassion fatigue are based on a conceptualisation of PTSD, and are therefore mainly concerned with symptoms, thereby giving context and etiology less attention. In contrast vicarious traumatisation is a more holistic approach to the individual and incorporates more than just symptoms of trauma but also individual's cognitive world (Steed & Bicknell, 2001). Despite the fact that Pearlman maintains that there is a distinct difference between compassion fatigue, and vicarious traumatisation, research indicates a link between these concepts (Figley, 1995).

Figley (1995) claims that compassion fatigue is related to the cognitive schema (social and interpersonal perceptions or morale) of the counsellor and therefore related to vicarious traumatisation (Figley, 1995). A study conducted by Lee (1995), based on a sample of therapists, found that there was a significant correlation between measures of cognitive schemas and measures of compassion fatigue (Figley, 2003). Furthermore the notions of compassion fatigue and vicarious traumatisation all point to the impact of trauma work on counsellors. Moreover vicarious traumatisation overlaps with compassion fatigue; and both are used interchangeably with secondary traumatic stress as they are both a result of working with victims of trauma. Therefore when both concepts are combined they provide material for in-depth analysis of traumatic stress reactions in trauma workers as it provides a more holistic view of the trauma worker (ie. does not solely concern itself with symptoms, but also includes other characteristics such as individual traits) (McCann & Pearlman, 1990).

Stamm (1997) states that secondary traumatic stress is a better term to use as it is more broad, and vicarious traumatisation and compassion fatigue are actually specific types of secondary traumatic stress (Ortlepp, 1998). Given the commonalities of these terms, the link between secondary traumatic stress and PTSD, and the fact that secondary traumatic stress is often used by other authors when referring to compassion fatigue and/or vicarious traumatisation (McCann & Pearlman, 1990; Ortlepp, 1998; Stamm, 1997) the current study will use the term secondary traumatic stress.

Although not directly relevant to this study its important to touch on the term burnout as it is often confused with and/or used interchangeably with compassion fatigue and

vicarious traumatisation (Adams *et al*, 2004; Figley, 1995; Gentry, Baranowsky & Dunning, 1997; Salston & Figley, 2003).

Gentry, Baranowsky and Dunning (1997) have found that compassion fatigue is often confused with burnout, however they argue that these two concepts are very different and are used in different contexts. Burnout is characterized as a state of emotional, mental and physical exhaustion caused by decreased ability to cope with one's environment (Gentry *et al*, 1997). It is associated with stress and hassles involved in an individual's work. It is cumulative, is relatively predictable, and often by simply taking a break or experience a change in scenery can help a great deal (Figley, 1995).

In addition, McCann and Pearlman (1990) state that although the burnout literature is relevant to working with victims, the effects of working with trauma victims are distinct from other populations because the trauma worker is exposed to emotional shocking images of suffering and horror (McCann & Pearlman, 1990).

More recently however, Figley (2002), Gentry, Baranowsky and Dunning (2002), and Salston and Figley (2003) have observed that secondary trauma and job burnout to some degree overlap as they are both characterised by the emotionally exhausting nature of working with trauma clients (Adams *et al*, 2004). However Salston and Figley (2003) argue that the concept of burnout is too vague to be valuable in understanding and helping those who work with victims of crime (Salston & Figley, 2003).

3.5. ABNORMAL / PATHOLOGICAL VERSUS 'NORMAL' CONSEQUENCE TO TRAUMA WORK

Critics of secondary traumata argue that classifying individuals with secondary traumatic stress is pathologizing, and trauma workers responses to traumatic material are best described as a reaction, not a disorder (Figley, 1995). They argue that although, individuals who are indirectly exposed to a traumatic stressor often exhibit PTS symptomology, these symptoms subside with time. Research by Zimering, Munroe & Gulliver (2000) showed that in both direct and indirect trauma exposure, only a small percentage of individuals will develop the full psychological disorder (Zimering *et al*, 2003). In addition Rosenbloom, Pratt, and Pearlman (1995) state that

the effects of secondary traumatic stress are reversible and trauma workers can minimize or improve the negative impact of trauma work (Durrant, 1999).

In PTSD research it said that although PTS symptomology is disturbing for the victim, it is considered to be normal reactions to abnormal events (Hamber & Lewis, 1997). With reference to PTSD and after extensive observation of Jewish prisoners in a concentration camp, Viktor E. Frankl stated that “It’s normal to act abnormally in an abnormal situation” (Frankl, 1985, p.39). Similarly, secondary traumatic stress is seen as a normal reaction to working with trauma rather than a pathological condition (Creamer & Liddle, 2005; Figley, 1995). Rosenbloom, Pratt, and Pearlman (1995) state “it is important to emphasise that such responses on the part of the helper are not viewed as pathological; just as PTSD is viewed as a normal reaction to an abnormal event, vicarious traumatization is a normal reaction to a stressful and sometimes traumatizing work with victims” (Rosenbloom, Pratt, & Pearlman, 1995 cited in Durrant, 1999, p16).

In summary there are several issues regarding secondary traumatic stress. Firstly, and most importantly, there has been lack of conceptual clarity about what constitutes as secondary traumatic stress and how it differs from other adverse work (Adams *et al*, 2004). It is also often misunderstood and labelled as pathological (Creamer & Liddle, 2005). Secondly, the state of knowledge surrounding secondary traumatization is in its infancy and has received scant attention in comparison to PTSD. Secondary traumatic stress has largely been a theoretical issue, while studies supporting this theory are severely lacking (Macliam, 2003). Finally, there are also several scales which are used to measure secondary traumatic stress, however they consist of many dissimilar items and therefore provides a poor evaluation of the concept (Adams *et al*, 2004). Below is a summary of general research findings on secondary traumatic stress.

3.6. GENERAL RESEARCH FINDINGS

Research conducted by Beaton and Murphy (1995) showed that emergency and crisis workers may take on board the traumatic stress of those they help. This puts them at risk for compassion fatigue. They also found that the cost of not attending to the problems of compassion fatigue puts these workers at risk of short-term and long-

term physical and emotional disorders, strains on interpersonal relationships and shortened careers (Beaton & Murphy, 1995).

Kassam-Adams (1995) conducted a study on 100 psychotherapists working in outpatient agencies. About 50% of the participants were found to report symptoms of secondary traumatic stress including symptoms of intrusions, and avoidance. Their stress levels were found to be inversely related to the level of social support which they received. A main finding in this study was that the therapists' secondary stress levels were found to be directly related with the level of exposure to sexually traumatised clients (Kassam-Adams, 1995).

Wilson (1998) conducted a quantitative and qualitative study on 20 crisis counsellors in South Africa. Her research examined the incidence, nature, impact and process of secondary traumatic stress in this sample. It also looked at the perceived effectiveness of supervision. Her results revealed that counsellors suffer from secondary traumatic stress and that the process of supervision can effect the amelioration/continuation of this negative outcome. The counsellors conveyed that the stress they endured as a result of their counselling work effected their personal lives in many ways (eg. caused them to distance themselves from others) (Wilson, 1998).

Ortlepp (1998) conducted a quantitative and qualitative study on non-professional trauma debriefers in banking institutions. This study aimed at determining whether workplace trauma debriefers suffer from secondary traumatic stress, and the effect of personal and organisational variables on their potential experience of this secondary traumatic stress. Results indicated that, in general, the participants did not experience symptoms of secondary traumatic stress in the long term, although they tended to experience changes in their cognitive schemata (Ortlepp, 1998; Ortlepp & Friedman, 2001).

Lastly, in a South African study based on 100 students linked to the medical sciences, Durrant (1999) investigated the risk of developing symptoms of compassion fatigue. Results showed that the students were at high risk of compassion fatigue, furthermore there was no significant difference in the degree of risk between the different fields of medical science (ie. physiotherapy and occupation therapy). She concluded that those working in stressful environments, are at risk of compassion fatigue (Durrant, 1999).

These research examples illustrate three important reasons for this particular study (1) various researchers refer to different terms of secondary traumatic stress and therefore a clearer conceptualisation of secondary traumatic stress is needed; (2) trauma workers are particularly vulnerable group in the development of secondary traumatic stress and thus a population that is important for further study; and (3) that certain factors seem to contribute to the development of secondary traumatic stress and therefore require attention.

3.7. CONCLUDING COMMENT

This chapter provided a brief conceptualization of trauma, and attempted to give a more holistic understanding for the current research. It presents an overview of the consequences of violent crimes on those who experienced them directly (PTSD). It also introduces the notion that those who are in close association with direct victims may also be affected.

This chapter went on to further explore the conceptualisation of secondary traumatic stress with regards to two theories- Figley's (1995; 2003) theory of compassion fatigue and McCann and Pearlman (1990) theory of vicarious traumatisation, as these relate to trauma workers. What becomes evident in this chapter is that although these authors have written extensively on the phenomena of secondary traumatisation, the level of combined data is not matching the sophistication of existing theories of PTSD. This inadequacy emphasises the need for further research into this area. There is also lack of empirical support compared to other areas of trauma (eg. PTSD) indicating another gap, and purpose for this research.

Lastly, this chapter also looked at the conceptual confusion in literature regarding the notion of traumatic stress in those who help victims of trauma. Thus the current research will also provide support as to the relationship between the concepts compassion fatigue and vicarious traumatisation and secondary traumatic stress.

CHAPTER FOUR:
INDIVIDUAL AND ENVIRONMENTAL FACTORS THAT INFLUENCE THE
DEVELOPMENT OF SECONDARY TRAUMATIC STRESS

4.1. INTRODUCTION

An interesting question that has arisen is why some trauma workers develop secondary traumatic stress while others do not. In answering this question several theories have been developed in the field of secondary trauma. These theories centre on notions of exposure, empathy and personal and/or external factors which attempt to provide an explanation (Wilson, 1998).

In order to accurately describe the nature of secondary traumatic stress within which findings from research studies can be understood, a theoretical framework is needed. However only a few authors have attempted to do this (Ortlepp, 1998). With regards to PTSD, factors such as prior history, age, environment, personality, different psychological make-up, and gender differences have been theorised and researched into having an impact on developing this disorder (Baldwin, 2004; Carlson & Dutton, 2003; Kleber & Brom, 1992). Similarly all these factors are theorised to have an impact on the development of secondary traumatic stress, however very little research has been implemented to explore this, especially with regards to key hypothesised variables such as empathy, level of exposure, and level of perceived social support, despite continuous reference to them (Figley, 1995; Dutton & Rubinstein, 1995).

4.2. THEORETICAL MODELS OF SECONDARY TRAUMATIC STRESS

Similar to PTSD, several authors have developed theoretical models in an attempt to explain the nature of secondary traumatic stress, and also to provide a framework within which results from empirical studies can be understood (Beaton & Murphy 1995; Dutton & Rubinstein, 1995; Figley, 1995). Although there are a number of models in psychology that provide theories which attempt to explain secondary traumatic stress (eg. Beaton and Murphy's (1995) theoretical systems model of secondary traumatic stress, Yasse's (1995) ecological model and Friedman's (1996) twin peaks model) this study will focus on two of the most widely used and accepted models- Figley's (1995) '**Trauma Transmission Model**' and Dutton and Rubinstein's (1995) '**Ecological Framework of Trauma**'. These models were

chosen as they appear to be more relevant to trauma workers than other models in this field, they are more comprehensible and applicable, and they can easily be integrated into a working model of secondary traumatic stress.

4.2.1. Trauma Transmission Model

Figley (1995) developed a trauma transmission model, consisting of two parts (model of compassion stress and model of compassion fatigue), from literature on traumatic stress, interpersonal relationships, and burnout (see figure 1 & 2) (Figley, 1995). His model attempts to explain the process of trauma transmission and account for why some people develop secondary traumatic stress (he refers to the term compassion fatigue) while others do not. The main concept of this model is empathy. Other aspects include the counsellors behaviour towards the victim, exposure to trauma, sense of satisfaction derived from helping, and the ability of the counsellor to disengage from the process (Figley, 2003).

This model posits that helpers attempt to understand the trauma victim by identifying with the victim. They do this by trying to clarify 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 helper tries to answer these questions for the victim in order to adapt their own behaviour in accordance with their answers. In this process the trauma worker actually experiences very similar difficulties (eg. sleeping problems) to those of the victim (Figley, 1995).

The model is represented in the following diagram:

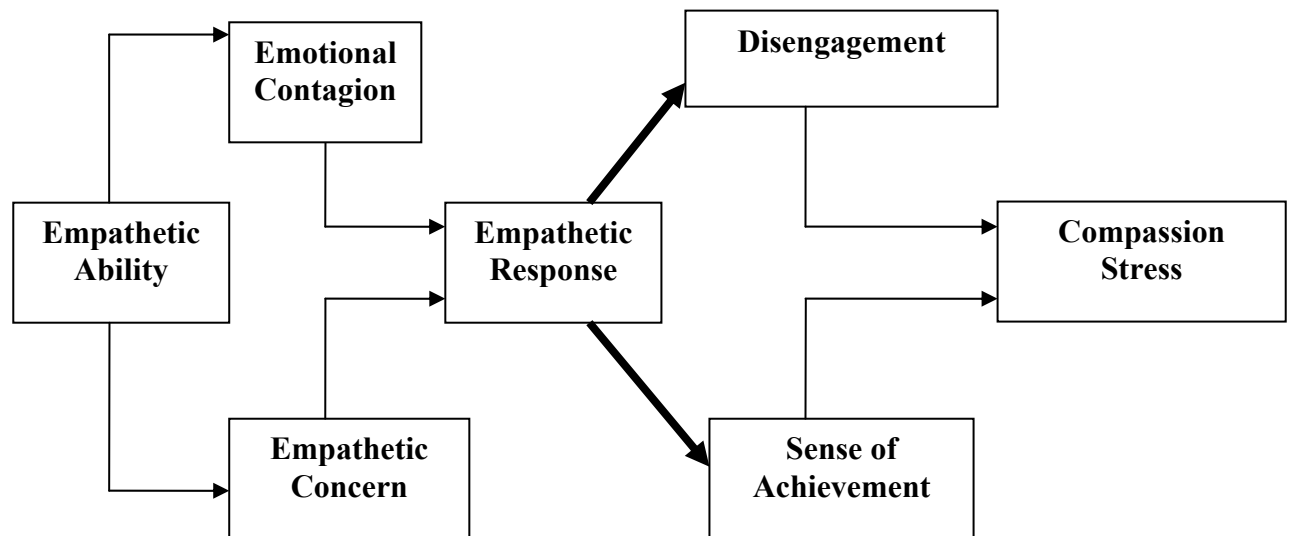


Figure 1: A Model of Compassion Stress (Figley, 1995).

The first component of the model explains the onset of secondary traumatic stress (see figure 1). Figley (1995) illustrates how compassion stress is a function of six interacting variables. Compassion stress is defined as “the stress resulting from helping or wanting to help a traumatized person” (Figley, 1995, p.16). This differs to compassion fatigue which is “a state of exhaustion and dysfunction- biologically, psychologically and socially- as a result of prolonged exposure to compassion stress and all that it evokes” (Figley, 1995, p.253). Figley (1995) further emphasises the importance of empathy in the development of compassion stress, and sees compassion stress as developing into compassion fatigue (Figley, 1995).

As stated the main aspect of this model is empathy. Figley (1995) separates empathy into three types: empathetic ability, empathetic concern, and empathetic response. Empathetic ability relates to the effectiveness of the trauma worker, and their ability to recognise the pain of others. In other words the trauma workers ability to accurately convey genuineness, unconditional positive regard, and respect to the victim. A trauma workers empathetic ability is usually the characteristic that leads them to become a helper. Thus the concept of empathetic ability is linked to

empathetic concern, which constitutes the motivation to respond to the victim. Without this motivation the trauma worker plays no significant role and would be useless to the victim. Empathetic response is a combination of the trauma workers empathetic ability and empathetic concern, and it measures the level of effort exerted by the helper in helping the client deal with pain and guiding the way for healing through hope and support (Figley, 1995) (*empathy is discussed further on in the chapter*).

Another important aspect of his model is emotional contagion. Emotional contagion is defined by Figley (1995) as “experiencing the feelings of the sufferer as a function of exposure to the sufferer” (Figley, 1995, p.252). Figley (1995) links emotional contagion to the trauma workers empathetic ability, which in turn gives rise to compassion stress (Figley, 1995).

Although Figley (1995) does not directly indicate this in his model he states that the meaning that the trauma worker attaches to their work will determine the level of compassion stress that they will experience (Figley, 1995). The trauma workers assessment of their empathetic response and their ability to disengage from the relationship establishes the degree to which the trauma worker develops compassion stress. If the helper can disengage from the process successfully they will experience a sense of satisfaction from helping rather than any negative effects (Figley, 1995).

The next phase of the development of compassion fatigue is illustrated in the following figure:

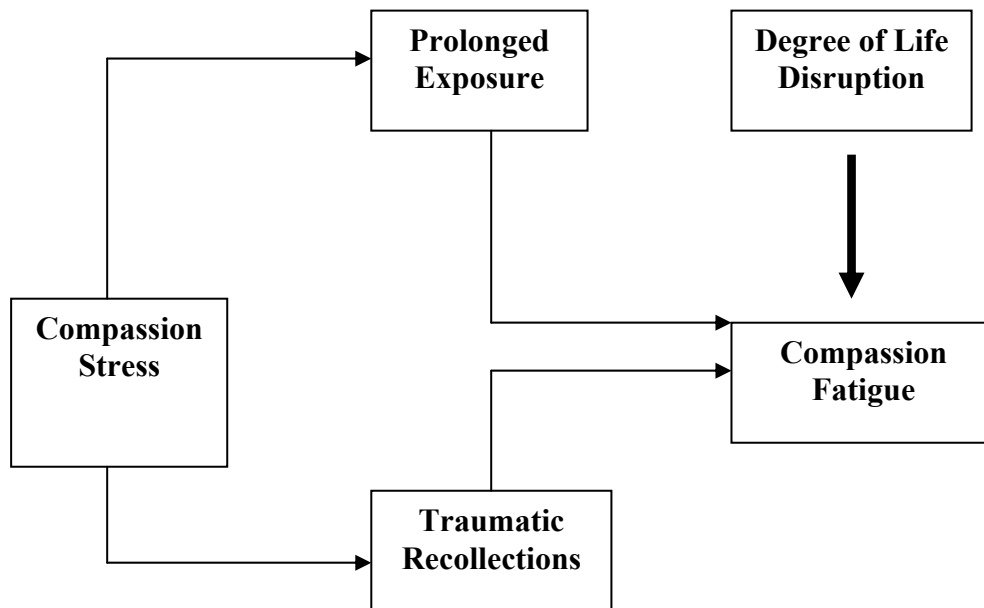


Figure 2: A Model of Compassion Fatigue (Figley, 1995).

Part two of Figley's (1995) trauma transmission model (see figure 2), which is an extension of part one, shows how the development of compassion fatigue is a function of four interacting variables: level of compassion stress; prolonged exposure to the victim; traumatic recollections; and degree of life disruption. Figley (1995) explains that prolonged exposure to traumatic material occurs as a result of the trauma worker's feeling that they continuously have to take care of and are responsible for their client. During this time the trauma worker feels that they are solely responsible for the victim, and thus are unable to minimise their compassion stress. Due to the level of traumatic content, recollections cause secondary symptoms and other related responses. Figley (1995) states that the onset of compassion fatigue is automatic when these circumstances are prevalent (Figley, 1995).

Although Figley's (1995) trauma transmission model provides a useful framework for understanding the onset of secondary traumatic stress, it is critiqued for being too narrowly focused and too complex (Kleber & Brom, 1992; Ortlepp, 1998). Many authors emphasise the importance of contextual and circumstantial factors in the

traumatising experience and its aftermath (Kleber & Brom, 1992), however this model does not take adequate consideration of other environmental variables that play a vital part in the therapeutic relationship. Although Figley (1995) does take into account 'prolonged exposure' and 'degree of life disruption', he does not adequately encompass the interaction of cultural and environmental systems. For example he neglects to discuss the exact role of social support and the helpers perceived usefulness of their social support networks (Marinus, 1997). Despite these criticisms Figley's model has provided a useful theoretical framework of secondary traumatic stress and helped in clarifying important variables in its onset. Thus it has further developed the theory of secondary trauma.

Although several studies (Adams *et al*, 2004; Durrant, 1999; Marinus, 1997; Ortlepp & Friedman, 2001) have used Figley's (1995) model in their literature to illustrate secondary traumatic stress process and to support their results, no studies could be located that use this framework as a foundation for their study. For example Adams, Boscarino and Figley (2004) conducted a study examining compassion fatigue and psychological stress among social workers. In this study they conceptualized secondary traumatic stress within this compassion fatigue framework, however this study was a validation study of measures of secondary traumatic stress rather than exploring the stress process (Adams *et al*, 2004).

4.2.2. Ecological Framework of Trauma

Another model that attempts to provide a theoretical framework for secondary traumatic stress is that of Dutton and Rubinstein (1995) (see **figure 3**). Dutton and Rubinstein (1995) developed an ecological framework of trauma which integrates aspects of Figley's model. However it also incorporates features relating to secondary traumatic stress, which are discussed above as lacking from Figley's (1995) trauma transmission model. Therefore Dutton and Rubinstein's (1995) model provides a further conceptual development of secondary traumatic stress.

There are a range of reactions that trauma workers may experience due to their work with victims of crime. According to Dutton and Rubinstein (1995) these reactions are categorised into three areas. The first category relates to indicators of psychological distress (eg. 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, physiological arousal, numbing or avoidance and intrusive imagery (Dutton & Rubinstein, 1995). This relates to the understanding of compassion fatigue as these responses refer to the symptomology experienced by the individual.

A second category of reactions experienced by the trauma worker refers to shifts in assumptions and beliefs about the world (ie. 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 order their behaviour. These assumptions exist on a preconscious level and are thought to be disrupted by exposure to trauma (directly or indirectly), which then causes psychological stress and symptom formation (Janoff-Bulman, 1992). This relates to vicarious traumatisation which is a result of changes in cognitive schemata due to secondary traumatisation.

Relational disturbances, is the last category of reactions to secondary traumatic stress. Firstly relational disturbances may occur within the counselling relationship as a result of mistrust between the client and trauma worker. In addition, as a result of secondary exposure, trauma workers relationships (both professional and personal) may suffer. Research shows that is particularly the case when working with victims of crime especially in incidences of abuse, as this may increase the trauma workers' sensitivity to those same dynamics in their personal relationships. In the workplace they may isolate themselves (Dutton & Rubinstein, 1995).

With regards to these categories, Dutton and Rubinstein (1995) theoretical model of secondary traumatic stress consists of four components: (1) the traumatic event to which the trauma worker is exposed; (2) trauma workers coping strategies; (3) the trauma workers PTS reactions; and (4) personal and environmental factors (Dutton & Rubinstein, 1995). The framework for understanding the interrelationships between these components is illustrated in the following figure:

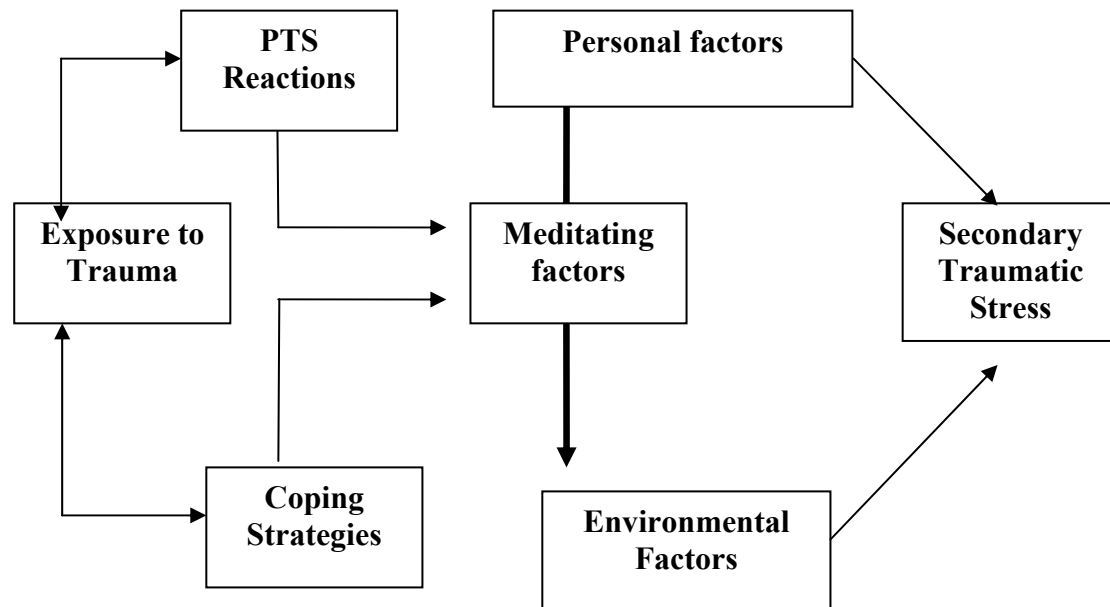


Figure 3: Dutton and Rubinstein's (1995) Model of Secondary Traumatic Stress

Dutton and Rubenstein (1995) stated that exposure to traumatic material is unique for every trauma worker (Dutton & Rubenstein, 1995). This is due to five main reasons. Firstly, the traumatic material differs in degrees of severity from one victim to another. Secondly, the trauma worker is not only exposed to traumatic material but the emotions that the victim experiences in relation to the event (eg. pain, anger, powerlessness). Thirdly, the trauma worker is also exposed to the re-victimisation of their client which may occur as a result of social systems. Fourthly, the trauma worker is exposed to the realisation that the type of trauma does occur, which may in turn challenge their cognitive beliefs. Lastly, the trauma worker may also have to deal with previous trauma that their client endured, which may resurface (Dutton & Rubenstein, 1995). All these different means of exposure to traumatic material make the nature of the exposure unique to the trauma worker, therefore this model points to research into the level of exposure to traumatic material to which the trauma worker is exposed when looking at secondary traumatic stress.

The second component of this model involves coping strategies. Dutton and Rubenstein (1995) assert that coping responses affect the development and course of secondary traumatic stress reactions (Dutton & Rubenstein, 1995). Coping is defined

as the individual's cognitive and behavioural efforts in controlling internal and external demands considered to be challenging or exceeding the adaptive resources of a person (Davidson, 2001). An individual's coping responses have been found to be related to levels of stress. According to Dutton and Rubinstein (1995) there are two types of coping strategies: personal (eg. attending to personal needs, developing supportive relationships) and professional (eg. peer supervision and consultation). These types of strategies are linked to a person's social support network. Dutton and Rubinstein (1996) state that their list of coping resources has not been empirically tested in the literature (Marinus, 1997).

Dutton and Rubenstein (1995) also discuss the role of individual and environmental factors, which they believe may be mediators of secondary traumatic stress. Individual factors comprise of the trauma workers inner strengths (eg. high self-esteem) their resources (eg. training, experience), their vulnerabilities (such as prior trauma history, counter-transference), and their level of satisfaction with both their personal and professional life (Dutton & Rubinstein, 1995). Research conducted by Dutton and Rubinstein (1995) found that variables measuring level of experience to be the best predictor of levels of stress for trauma workers (Dutton & Rubinstein, 1995).

Environmental factors are the second group considered to be important in mediating secondary traumatic stress (Dutton & Rubinstein, 1995). Dutton and Rubenstein (1995) discuss the following environmental factors as being important: social support; organisations response to the trauma worker; the context within which the trauma worker works and lives; and social and cultural factors (eg. gender, ethnicity). All these factors influence how the trauma worker responds emotionally to their clients (Dutton & Rubinstein, 1995).

Although this model is useful in recognizing some of the core components of secondary traumatic stress (Dutton & Rubinstein, 1995) it is flawed to some degree as it fails to mention the nature and location of these four components in relation to one another. Furthermore while Dutton and Rubinstein (1995) introduce the idea of a mediating variable, they provide no explanation of the role of the mediator as compared to a moderator. Lastly even though authors and research studies have made

reference to Dutton and Rubenstein's (1995), no studies using this model could be located.

Despite these flaws and limitations, Dutton and Rubenstein (1995) do emphasise the need for empirical studies with regards to these components (Ortlepp, 1998).

4.2.3. Comparison of both models of secondary trauma

Whilst Figley's (1995) model and Dutton and Rubenstein's (1995) model are complimentary, specific to trauma workers, linear, and emphasise cognitive elements, they differ in their focus. Figley's (1995) model primarily emphasises elements of the trauma workers personality, whereas Dutton and Rubenstein (1995) consider a wider range of variables, but mainly focus on environmental factors. Therefore each model compensates for what is lacking in the other model. Hence combined they would provide a broader and more inclusive model for the development of secondary traumatic stress.

Another criticism of these models is that although both models have offered an explanation of how secondary traumatic stress occurs, they both fail to explain the process of their models. It is argued that both these models have been unable to convincingly explain the mechanism that describes the transmission of traumatic stress from primary to secondary victims (Salston & Figley, 2003). Furthermore, to the researcher's knowledge, there have been no studies that have directly used either Figley's model or Dutton and Rubenstein model as a framework. However despite this critique many South African studies have provided, indirectly, support for both these models in their discussions of individual or environmental characteristics that play a role in the development of secondary traumatic stress (Ortlepp, 1998, Marinus, 1997).

Due to the flaws of these models and the criticisms discussed above, the primary aim of this study is to provide a better conceptualisation of key personal and environmental factors in the onset of secondary traumatic stress. In addition this research will provide empirical evidence with relation to an integration of both these models.

4.2.4. A Refined Trauma Model for Trauma Workers in South Africa

In an attempt to improve the ideas derived from Figley's (1995) model and Dutton and Rubenstein's (1995) model the current study proposes the following refined model depicted in **Figure 4**. This refined model provides the foundation for the current research and provides a means of organizing the theoretical concepts to be explored in a logical fashion.

The framework for the current study, which presents an understanding of the components involved in the development of secondary traumatic stress and their interrelationships is illustrated in the following figure.

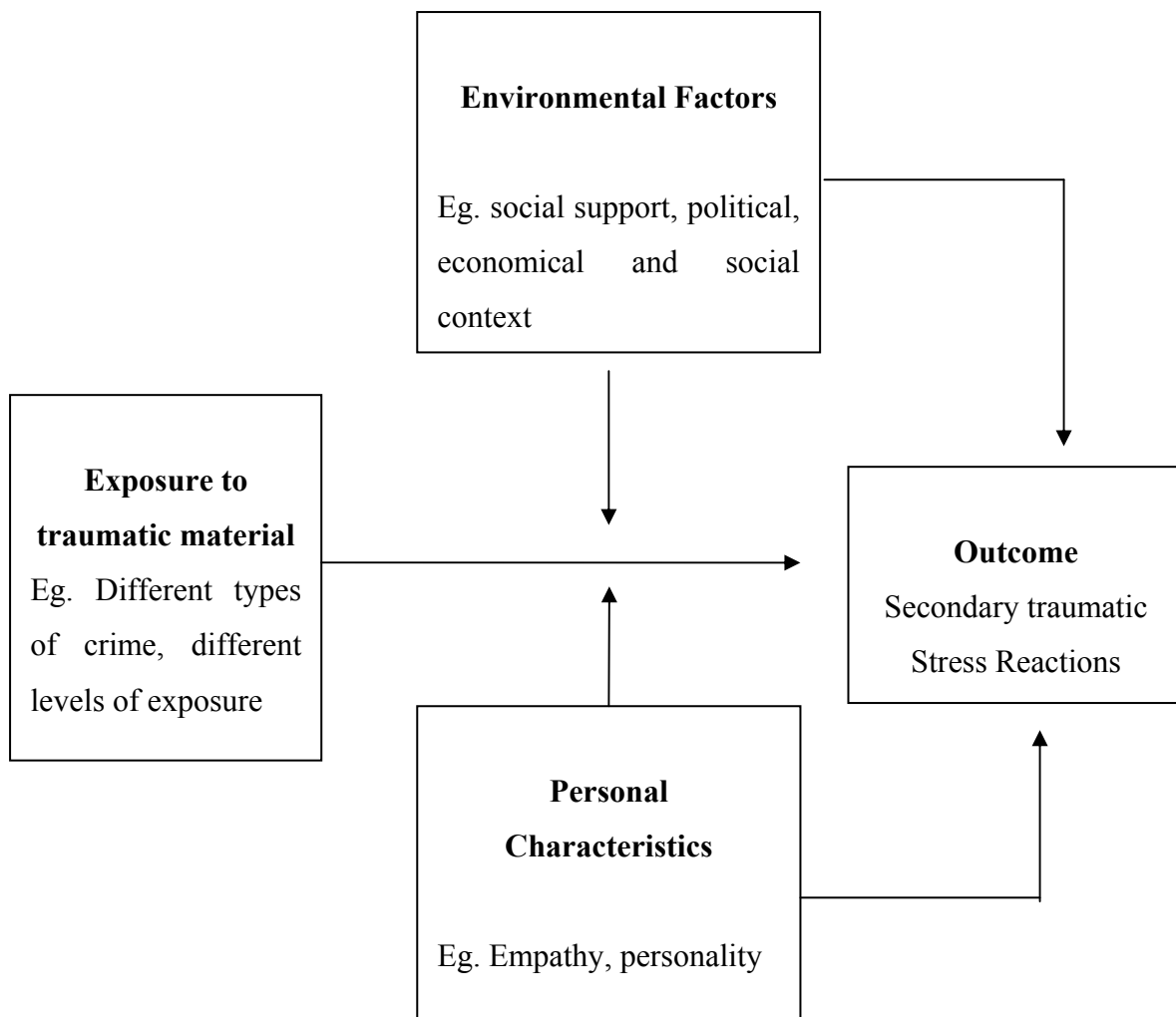


Figure 4: Towards a refined trauma model for trauma workers who work with victims of violent crimes.

This refined trauma model for trauma workers who work with victims of violent crimes provides a framework of the key variables to be researched in the current study, their interaction, and their possible outcome. This model reflects a general understanding of how secondary traumatic stress develops according to Figley's (1995) trauma transmission model and Dutton and Rubenstein's (1995) ecological framework for trauma (Dutton & Rubenstein, 1995; Figley, 1995; 2003). Therefore this model stresses that secondary traumatic stress is a result of exposure to traumatic material. However the variability in the levels of secondary traumatic stress can in part be attributed to individual characteristics such as demographic factors (eg. age, gender) and personal factors (eg. previous traumatic experiences, level of empathy) and environmental factors such as social support and political context. The process of developing secondary traumatic stress is described as linear, as it is a result of a direct relationship and this model does not introduce a feedback loop.

The first component of this model is the trauma workers level of exposure to traumatic material. Traumatic material refers to the type/s of violent crime/s in which the trauma workers client has been a victim. The level of exposure to this material is measured by the frequency of violent crimes which the trauma worker has dealt with (within a specific time limit), the severity of the violent crimes, and length of working as a trauma worker. It also includes the nature of the trauma and any exposure to previous non-work related trauma experienced by the trauma worker.

This model theorises that factors such as frequent exposure to traumatic material (ie. higher workload), and the nature of or different types of traumatic material (eg. rape, hijackings, murder) would differentiate the level of secondary traumatic stress experienced by the trauma worker. In addition due to the high levels of crime in South Africa, there is a good probability that the trauma workers themselves may have been exposed, at some stage, to some sort of violent crime(s). Therefore prior trauma history may impact the development of secondary traumatic stress (Adams *et al*, 2004). As Berkman once stated "Trauma does not heal trauma. Trauma only adds to trauma. Trauma deepens trauma" (cited in Solomon, 1993, p.20). This is supported by research conducted by Creamer and Liddle (2005), which found a relationship between therapist personal trauma and secondary traumatic stress symptomology

among therapists who work with victims of violent crimes (especially rape) (Creamer & Liddle, 2005).

As not all trauma workers develop secondary traumatic stress following exposure to duty-related traumatic events, this indicates the existence of moderating variables (Lowery & Stokes, 2005). A variable is understood to serve the function of a moderator if the relationship between two variables changes as a result of this variable (Baron & Kenny, 1986). (*This will be elaborated further in the methodology chapter*)

This model includes two moderating components of secondary traumatic stress: personal characteristics and environmental factors. These factors are hypothesised to moderate the relationship between level of exposure to traumatic material and the trauma workers outcomes (Baron & Kenny, 1986). Personal characteristics that can have a moderating role on the development of secondary traumatic stress include empathy, personality, resources (eg. training, qualification), countertransference, and satisfaction with life (Baldwin, 2004; Dutton & Rubinstein, 1995; Figley, 1995). Environmental factors include an individual's level of social support (personal and professional), institutional or professional responses to the person's work, and the political, economic and social context in which the trauma worker lives (Dutton & Rubinstein, 1995). For example although a trauma worker may be exposed to high levels of traumatic material and would most likely develop secondary traumatic stress, because he/she is receiving support from his/her supervisor and his/her family, it counteracts any negative outcomes.

This model also proposes that individually both personal characteristics and environmental factors also have an impact on the degree to which the trauma worker experiences secondary traumatic stress as an outcome.

The last component of this model is the outcome (ie. secondary traumatic stress reactions) of the trauma worker. This component illustrates the negative effects of being a trauma worker. This would include psychological, cognitive and physiological manifestations of secondary traumatic stress. If the trauma worker

experiences any of these outcomes it may lead to the cessation of being a trauma worker.

4.3. KEY VARIABLES OF SECONDARY TRAUMATIC STRESS

Although theories pertaining to trauma and secondary traumatic stress suggest that level of exposure, environmental factors and individual factors have an influence on individual's reactions to traumatic material, there is little empirical evidence to support these hypotheses. Furthermore it is important to know how trauma workers become traumatised as a result of their exposure to victims. Therefore according to the proposed refined trauma model for trauma workers who work with victims of violent crimes and literature on secondary traumatic stress, variables which are considered to be key in the development of secondary traumatic stress will be the focus of the current study. These key variables are level of exposure, level of empathy and perceived social support. These will be further discussed in-depth.

4.3.1. Level of Exposure to Traumatic Material

Traumatic events differ significantly and thus may contain implications for the understanding the nature, severity and duration of the trauma workers reactions (Dutton & Rubinstein, 1995). The issue of exposure to traumatic material was highlighted by Figley (1995), Dutton & Rubinstein (1995), and Pearlman and associates (1992) as an issue central to their respective theories of compassion fatigue, secondary traumatic stress, and vicarious traumatisation, and has become central to discussions of secondary traumatic stress (Steed & Bicknell, 2001).

Although the level of exposure to traumatic material has become an area of increased interest, the main focus of these studies has been on war and natural disasters, and other traumas, ignoring the effects of criminal violence (Dutton & Rubinstein, 1995; Figley, 1995; Friedland, 1999; Mendelsohn, 2002). Due to the relatively high levels of violence in South Africa, the nature of this type of trauma, and its relevance to South African studies, makes studies that are concerned with secondary exposure to violent crimes an area of great importance.

What's more, unlike emergency workers, who respond to immediate effects of a traumatic event, trauma workers who work with victims of violent crimes are faced

with prolonged and intense consequences of the trauma (Dutton & Rubinstein, 1995). Therefore working with these types of victims involves more than just exposure to the traumatic event, it includes exposure to the survivors pain, fear, rage, hopelessness and further victimization which the survivor may experience (Dutton & Rubinstein, 1995). As a result of this exposure it is proposed that this population may have far more complex outcomes than other populations such as emergency workers.

In the literature the subjective perception of a traumatic event is highlighted as an important factor influencing symptoms of both PTSD and secondary traumatic stress (Benatar, 1996). It is said that exposure to traumatic material is unique for every trauma worker (Dutton & Rubinstein, 1995) as some traumas may be harder to deal with than others, or some trauma workers may be exposed to different levels of crimes than others (Cerney, 1995). Level of unpredictability of traumatic events, source of traumatic experience, and level of death threat involved all seem to influence the degree to which the trauma worker becomes affected (Macliam, 2003). Due to the uniqueness involved with this type of work, there is a great need for research into the level of exposure to traumatic material (this includes the nature and content of exposure), especially as it may differ according to an individual's level of qualification, which in turn may increase or decrease the likelihood of developing secondary traumatic stress.

However, despite subjective experience being highlighted in the literature, according to Steed & Bicknell (2001) the primary factor influencing an individual's level of exposure to traumatic material is the extent of their caseload (Steed & Bicknell, 2001). They argue that higher caseloads increase exposure to traumatic material. This is supported by Schauben & Frazier's (1995) qualitative and quantitative investigation of secondary traumatic stress in 148 female therapists working with victims of sexual violence. They found that higher client caseloads correlated with more disrupted beliefs, more symptoms of PTSD and more self-reported vicarious traumatisation (Steed & Bicknell, 2001).

Although level of exposure to traumatic material has been accepted as being a main variable in trauma literature, it requires further research as there is currently a discrepancy in the findings regarding the relationship between level of exposure to

traumatic material and experience of secondary traumatic stress. Earlier findings in this field specify that trauma workers level of exposure with regards to the amount of caseloads was not an indicator of secondary traumatic stress. For example, Follette, Polusny, and Milbeck (1994) who examined predictors of PTS symptomatology in professionals exposed to traumatic stress through their jobs found that the percentage of caseload was not significant in predicting secondary traumatic stress (Steed & Bicknell, 2001). Supporting these findings, Kassam-Adams (1995) study on psychotherapists working with sexual assault victims found that there was no significant relationship between workload and symptoms of traumatic stress reported (Cornille & Woodard Meyers, 1999). This and further research suggests that a person's caseload, as a type of exposure to traumatic material does not impact on secondary traumatic stress.

On the other hand, contrary to this evidence several researchers have found that the caseload did in fact impact on secondary traumatic stress. For example, in a study of stress among therapists who were indirectly exposed to trauma, Chrestman (1995) reported a relationship between increased professional experience, the number of clients in therapists' caseloads, and increased secondary traumatic stress symptoms. She also reported a relationship between higher percentages of time spent at work and an increase in avoidance symptoms (Cornille & Woodard Meyers, 1999). In support of these findings a study by Cornille and Woodard Meyers (1999) on secondary traumatic stress among Child Protective Service Workers, found that staff with higher caseloads experienced higher levels of secondary traumatic stress (Cornille & Woodard Meyers, 1999). Due to these above discrepancies, the influence of level of exposure to traumatic material on secondary traumatic stress is worthy of further exploration. Perhaps these discrepancies suggest the role of moderating variables like social support and empathy or other variables that play a more central role.

Recently it has become evident that there are several limitations to equating caseload with level of exposure such as neglecting the importance of the severity of crime dealt with, and the length and detail to which the trauma worker was exposed. Many researchers have therefore stated that secondary traumatic stress is more a function of level of qualification, experience and training skills that the person brings to the counselling session rather than the amount of cases that they deal with (Cornille &

Woodard Meyers, 1999; Durrant, 1999; Steed & Bicknell, 2001). With respect to this view one would expect those new to the field to be more susceptible of developing secondary traumatic stress (Lowery & Stokes, 2005). For example a study conducted by Creamer and Liddle (2005) on disaster mental health workers showed that less experience was associated with higher secondary traumatic stress (Creamer & Liddle, 2005).

Previous exposure to non-work related trauma is also often equated with level of exposure. This is different to work related exposure as it occurs on a personal level, it needs to be worked through separately, some authors consider it to be more dangerous to ones psychological health than work-related trauma, and its effects might lead to PTSD which would add to the severity of secondary traumatic stress experienced (Solomon, 1993). While in the past it was often thought that previous exposure to trauma, increased a persons ability to cope with trauma, recent PTSD studies have shown that re-traumatisation seems to intensify and increase PTS symptoms (Solomon, 1993). Studies have shown that a history of previous trauma is also related to poor psychological health in psychotherapist (Cornille & Woodard Meyers, 1999).

Lastly, in relation to level of exposure, Green (1994) argues that the primary risk factor associated with the development of PTSD, and inferentially secondary traumatic stress, is the level of severity of exposure to stressors (Durrant, 1999). Those that are perceived to be most severe are rape, torture, life threat, abusive violence and grotesque death (Benatar, 1996). Likewise, Kristofferson and Gjestad (1996) found that when dealing when children who are victims of trauma, mores intense emotional reactions can be expected from trauma workers (Adams *et al*, 2004). In a South African study, Durrant (1999) studied whether students (n=100) allied with medical sciences are at risk of developing symptoms of compassion fatigue. She found that exposure to the more traumatised patient contributed to the risk of developing compassion fatigue more than the number of patients they had dealt with (Durrant, 1999).

In a study regarding indirect exposure to violent crime in a sample of first year South African students in Gauteng, Jacobs (2002) found a significant relationship between the nature, and severity of the traumatic event and levels of PTS symptomology. In

PTSD studies threat to life, severe physical harm or injury, exposure to grotesque and loss and/or injury of a loved one all correlate with the increased likelihood of developing PTSD (Jacobs, 2002).

Due to level of exposures importance in secondary traumatic stress, its contradictory findings, and relatively limited research; it was considered an important variable of research in the current study. In this study both caseload and previous history of trauma was used as a measure of exposure to traumatic material as these aspects of exposure were considered to be the best indicators of secondary traumatic stress. Furthermore differences in qualification were also explored.

4.3.4. Empathy- A Paradox?

Figley (2003) associates secondary traumatic stress with the ‘cost of caring’ for others in emotional pain (Figley, 2003). One aspect of ‘caring’ is empathy (Atkins & Steitz, 1998). Empathy is the variable that was chosen to be examined in this study as it is probably one of the most important skills needed for effective counselling/debriefing (Figley, 1995). It is also associated with many positive qualities that influence an individual to become a counsellor (Adams *et al*, 2004). There are many benefits to having qualities of empathy. It has been shown to be related to cooperation, sharing behaviour, moral reasoning, sensitivity, and responsiveness to the feelings of others. The importance of empathy is emphasised in most counselling programs as this quality helps counsellors to more effectively enter the ‘world’ of their clients (Wildeman, 2000). Yet, with concern to secondary trauma, little has been written about it. Furthermore up until recently it has been inadequately defined.

Empathy is a concept that has been examined by philosophers and psychotherapists and has been under investigation for some time and many definitions exist. In recent years, researchers have begun to focus on a multi-dimensional definition of empathy that considers both the cognitive and emotional aspects (Atkins & Steitz, 1998). The following paragraphs discuss how this conceptualisation relates to Figley’s definition of empathy.

Firstly, an empathic individual has the ability to correctly perceive the troubles of others. In this way they are able to help the client deal with pain and guide the way

for healing through hope and support (Figley, 1995). From this cognitive perspective, an individual behaves in a manner that communicates that they are concerned and that they care about their client (Atkins & Steitz, 1998).

Secondly, empathy can be a vicarious emotional process in which the person develops an emotional connection with another and in turn has an emotional response to the other's suffering (Regehr, Goldberg & Hughes, 2002). In this respect the trauma worker needs to have the ability to accurately convey genuineness, unconditional positive regard, and respect to their client (Figley, 1995; Regehr *et al*, 2002).

With concern to trauma workers who deal with victims of violent crimes, the two components of empathy may be expressed as the trauma worker experiences a cognitive awareness of the distress of victims, while maintaining an emotional connection with the victim (Regehr *et al*, 2002).

Figley (1995; 2003) believes that empathy is a paradox. Although it is the key characteristic that leads individuals to become helpers and is an excellent resource for trauma workers, Figley (1995) also states that by having an emotional connection to someone increases one's vulnerability to symptoms of secondary traumatic stress (Figley, 1995; 2003).

Yet despite the fact that there is theoretical literature on empathy in relation to secondary traumatic stress and Figley's (1995; 2003) constant referral to its paradoxical properties, a gap exists in terms of the research done in this area. The only relevant published research found by the researcher was a study conducted by Regehr, Goldberg and Hughes (2002) who explored the relationship between empathy and trauma in ambulance paramedics. Results of this study found that although those paramedics who are more emotionally empathic provided higher quality care, their ability to empathise with others also had several consequences (eg. sleeplessness, anger, and flashbacks). These consequences in turn led to secondary traumatic stress (Regehr *et al*, 2002). This study is congruent with Figley's understanding of empathy as a paradox.

Although limited studies of empathy exist, to the extent of the researchers knowledge there appears to be no research on the relationship between empathy and trauma workers who deal with victims of violent crimes. This creates a critical gap in secondary trauma literature as empathy is hypothesised to be one of the main factors in the process of secondary traumatic stress formation.

In summary, it has become evident that empathy is a paradox. On the one hand empathy is an important psychological resource. It also appears that those who become trauma workers tend to be more empathetic in nature, which is desirable as it results in more effective counselling. However, on the other hand, in accordance to the above study and the literature, it appears that trauma workers who are empathetic are at greater risk of developing secondary traumatic stress. This in turn will result in these trauma workers needing counselling and will ultimately lead to them retiring early from this type of work. This creates a problem and is therefore important to further investigate so that relevant steps can be put into place to protect the trauma worker. This study explores the relationship between level of empathy and secondary traumatic stress in order to add valuable information to the trauma field and to clarifying empathy's role in secondary traumatic stress.

4.3.3. Level of Social Support

Literature on secondary traumatic stress highlights social support as having an important role in altering the impact of negative outcomes. As anticipated, more supportive environments appear to be associated with better outcomes (Flannery, 1998). As Cerney (1995) points out, trauma workers “themselves need assistance in coping with their trauma” (Cerney, 1995, p.137).

The theory of social support has been promoted to help describe the variance in the development and preservation of psychological disorders. Studies of combat veterans showed that victims meeting the criteria for PTSD were shown to have very low levels of social support. There is also evidence to show that people whose support systems are weak or whose social environment is less accepting are more prone to developing stress disorders after experiencing a traumatic event (Carson, Butcher & Mineka, 1998). Although it appears that knowledge regarding social support has increased, there are many issues surrounding social support and there is still a lack of understanding into the precise ways in which support prevents or relieves stress.

One problem regarding social support revolves around the importance of differentiating between received support and perceived support. Received support refers to the actual support received when needed, whereas perceived support refers to the support which is perceived to be available when needed (Durrant, 1999). This distinction is important as social support may not always have a positive influence and thus it is the individual's perception of available support which must be examined (Blumberg, 2000). Chisolm (1990) suggests that the perception of emotional support is of great importance to the psychological health of the individual. In a study conducted by Dunkel-Schetter and Bennet (1990) it was found that perceived support is more related to health than actual support, however it was also found that negatively perceived support can work against the benefits of actual support (Carson, Butcher & Mineka, 1998). Figley (2003) argues that the uncertainty around the distinct between perceived and received social support may be due to the measures used to assess its quality and quantity (Figley, 1995; 2003). It appears that most measures fail to establish the trauma workers level of perceived social support. With this in mind Esprey's (1996) study on Post-Traumatic Stress and exposure to violence discussed the lack of empirical evidence to support the relationship between social support and the well-being of people. She also extended a social support questionnaire to include measure of perceived support, which can be used on trauma workers to measure their subjective experience of social support (Esprey, 1996).

Another concern is the lack of clarity of the definition of social support. For example, some author's definitions of social support try to be all encompassing, but actually appear to be rather unclear as they fail to focus on the essential elements and processes in the conceptualisation of social support (Flannery, 1998). As a result of this failure several authors have proposed that social support be conceptualised as a multidimensional construct. Support systems can encompass the provision of cognitive support (eg. explanations for the traumatic event), emotional support (eg. caring, trust and empathy), informational support (provision of information or skills which are helpful in finding solutions to a problem), social sanction, appraisal support (feedback given to a person as an evaluation of personal performance) and financial/practical assistance. These components can exist as a whole or individually (Flannery, 1998; Ortlepp, 1998). Thus this study is based on the idea that social support can include formal support such as therapy or professional supervision or

informal support such as peer supervision, family, the community and/or friends (Sarason & Sarason, 1996).

A further issue is to whether or not social support should be measured as a moderator variable (ie. buffer) or a main effect. This problem has been further exacerbated by the conceptualisation of social support in empirical studies. Studies have shown conflicting results with regards to the role of social support in secondary traumatic stress, this creates confusion (Flannery, 1998; Sarason & Sarason, 1996). Social support as a main effect acts as directly promoting health and health behaviours therefore protecting the trauma worker from negative outcomes. In this view social support is beneficial regardless of whether or not the trauma worker is under stress (Durrant, 1999). On the other hand the buffering hypothesis states that low levels of social support are not inherently stressful but in situations of trauma, trauma workers who have high levels of support will experience less negative outcomes than those with lower social support (Ortlepp, 1998). Although there has been empirical support with regards to both social support as a moderator and a main effect, results that have emerged are inconclusive and unclear about the exact role of social support in an individual's experience of secondary traumatic stress (Esprey, 1996; Wilson, 1998). Furthermore in reviewing current literature it has become evident that the terms mediator and moderator are used interchangeably. Using the wrong term will result in using the wrong statistical procedure which will have a vital impact on how the results are interpreted (Baron & Kenny, 1986).

Flannery (1998) comments on the lack of studies that have focused on social support and traumatic stress (Flannery, 1998). With secondary traumatic stress empirical studies have been severely limited (Durrant, 1999; Ortlepp, 1998; Wilson, 1998). Durrant's (1999) study on compassion fatigue in the medical sciences, found that perceived social support was significantly related to compassion fatigue. In other words strong perceived social support indicated lower degrees of risk of compassion fatigue. Durrant (1999) also found that high perceived social support moderated the impact of trauma (Durrant, 1999).

Ortlepp (1998) conducted a study that looked at non-professional trauma debriefers in the workplace. She found that social support was a main effect variable when

considering the relationship between participants perceived support and secondary traumatic stress as participants who indicated high levels of perceived social support displayed fewer symptoms of secondary traumatic stress. However findings showed social support did not emerge as a consistent moderator in the relationship between trauma debriefers' experiences and the indicators of secondary traumatic stress (Ortlepp, 1998).

Esprey (1996) investigated PTS response of South African township residents who were victims of continuous criminal violence. She explored the moderating effect of perceived social support on the traumatic stress. Results showed that perceived social support was not found to moderate this relationship; instead it had a direct significant correlation with PTS symptoms (Esprey, 1996).

Due to these conflicting results, lack of clarity into the precise manner in which social support relieves stress, confusion of the role of social support, and the lack of empirical research in this area, there is a need for this variable to be researched further.

4.4. INTERACTION BETWEEN EXPOSURE, EMPATHY, SOCIAL SUPPORT AND SECONDARY TRAUMATIC STRESS

A critical look at present literature shows that research tends to be univariate based and lacking deeper understanding. For example studies show that lack of social support leads to secondary traumatic stress; secondary traumatic stress is a result of level of exposure; and those who express high levels of empathy are more vulnerable of developing secondary traumatic stress. What the literature fails to do is provide a more complex conceptual understanding of the interrelationships between caseload, social support, empathy and secondary traumatic stress.

In researching environmental and individual characteristics it became evident that there was a lack of clarity surrounding their roles. A review of literature showed that researchers and authors in the field of secondary trauma consistently used the terms mediator and moderator interchangeably. This observation has been noted by Baron and Kenny (1986) whose article attempts to differentiate and provide a clear distinction of these terms. Baron and Kenny (1986) define a mediator as a variable

that accounts for the relationship between the independent variable and the dependent variable, whereas they define a moderator to be a variable that affects the direction and/or strength of the relationship between an independent variable and a dependent variable (Baron & Kenny, 1986). Therefore it becomes obvious in the context of this study that social support and empathy are potential moderators rather than mediators. In conceptually understanding their role they would alter the strength of the relationship between level of exposure to traumatic material and the outcome (ie. secondary traumatic stress); but they are not an appraisal process through which an event is subjectively evaluated as suggested by Dutton and Rubenstein (1995).

The present study introduced a refined model for trauma workers who work with victims of violent crime which attempts to illustrate and provided a conceptual understanding of the interrelationship between these variables. This model is based on the idea that the trauma workers level of exposure will determine the degree to which they experience secondary traumatic stress. However it also introduces the notion of moderating variables. This model proposes that level of empathy and level of social support are moderators in the secondary traumatic stress process. It is anticipated that level of empathy will moderate the relationship between exposure and compassion fatigue/vicarious traumatisation. Similarly it is anticipated that level of social support will moderate the relationship between exposure and compassion fatigue/vicarious traumatisation. In agreement with literature, individuals with higher levels of empathy, and poor support networks are more likely to develop secondary traumatic stress (Figley, 1995; 2003; Dutton & Rubenstein, 1995).

For example, although a trauma worker may have a high level of exposure to traumatic material, they may not experience secondary traumatic stress as their ability to empathise with their client is low and they have good social support network. In contrast another trauma worker may have experienced similar levels of exposure to traumatic material, however they have not received adequate support and they tend to empathise with their clients. These examples are illustrated below in **figure 5** under A and B, respectively.

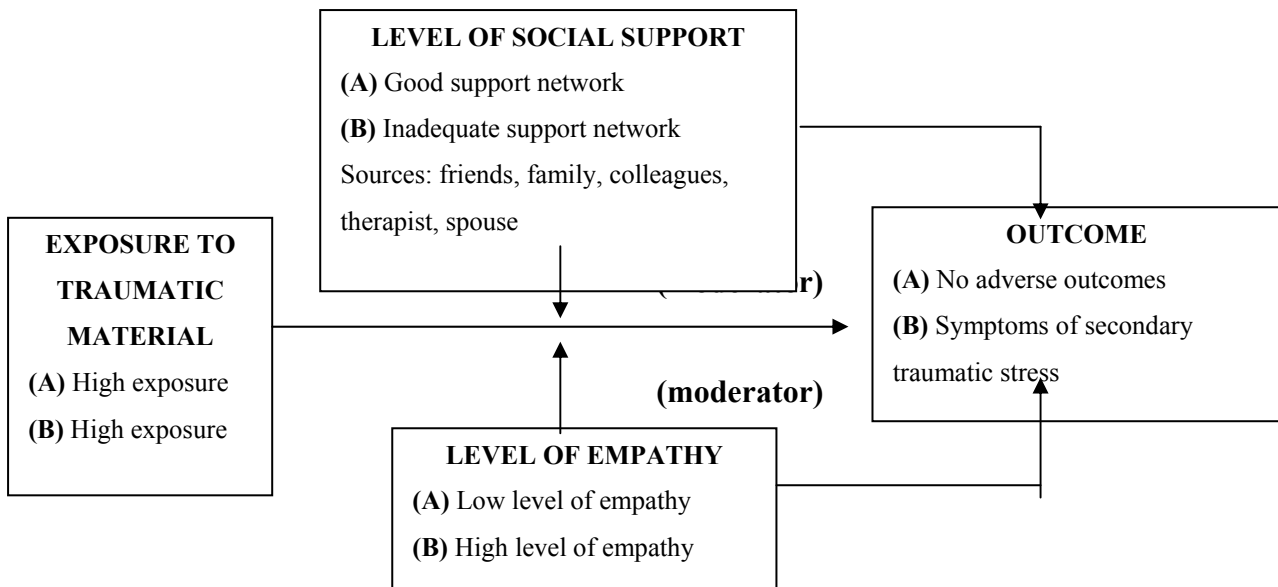


Figure 5: An illustration of the interrelationship between key variables in the secondary traumatic stress process

4.5. CONCLUDING COMMENTS

This chapter offers a context for understanding how trauma workers develop secondary traumatic stress. It attempted to argue that the current state of empirical literature on secondary traumatisation with regards to its key variables and trauma workers is in its infancy and is far too simplistic. Although theorists such as Figley (1995; 2003) and Dutton & Rubinstein (1995) theorise that certain environmental and personality factors influence secondary traumatic stress (Figley, 1995; Dutton & Rubinstein, 1995), very little research explores their models, especially with key variables of secondary traumatic stress. It also tends to be univariate in explanation. Due to the inadequacies of both these models a refined model for trauma workers who work with victims of violent crime was formulated to provide a framework for the current study.

This chapter then went on to operationalise key personal and environmental variables within the development of secondary traumatic stress, and clarify their theoretical proposed function as components of the stress process, including their interrelationship.

CHAPTER FIVE: **METHODOLOGY**

5.1. RATIONALE

The purpose of the literature review was twofold. Firstly it aimed to highlight the gaps in the trauma field which warrant further investigation. Secondly it provided a conceptual understanding for the present study. On the basis of the literature outlined above it is apparent that all people in caring professions are at risk of secondary traumatic stress. Despite this being acknowledged, in comparison to studies on direct victims, little attention has been directed to those who work with the traumatized, particularly with concern to trauma workers (professionals and especially non-professionals). As the incidence of violence in South Africa appears to be relatively high, trauma workers have become an important resource. However by the very nature of their roles, trauma workers are at risk of experiencing secondary traumatic stress, thus making them an important population for research.

Throughout the literature review it also became evident that there are certain key variables that play a critical role in the development of secondary traumatic stress. Those variables highlighted to be significant in the development of secondary traumatic stress are exposure to traumatic material, empathy and social support. Despite the importance and theory surrounding these variables, they have been largely neglected in research endeavours.

The current study aims to make a valuable contribution to the field of secondary trauma by exploring the experiences of trauma workers who work with victims of violent crimes. The purpose for this study is to attend to these research issues presented above and therefore gain information in order to provide those who work with victims of violent crime, knowledge of the negative outcomes to which they may experience.

This chapter covers the research aims, research questions, hypotheses and research design that guide the current study. It also gives details regarding the sample, instruments used, procedure, ethics and the statistical techniques that were adopted.

5.2. RESEARCH AIMS

The primary aim of the study is to determine the relationship between secondary traumatic stress and level of exposure to traumatic material, secondary traumatic stress and level of empathy, and secondary traumatic stress and level of perceived social support in a sample of trauma workers who work with victims of violent crime. This study also aims to explore the interrelationships between these variables.

Secondary aims of this study are to provide a clearer conceptualisation of the terms vicarious traumatisation and compassion fatigue and their relation to Secondary Traumatic Stress, and to explore whether the trauma workers qualification makes a difference in secondary traumatic stress levels.

5.3. RESEARCH DESIGN

The type of research design that was implemented for the study was a non-experimental ex post facto design, namely correlational design, in order to explore the relationship between the various research variables. This type of design is normally used in situations where the researcher cannot manipulate the independent variable(s), as was the case in the current study. Non-experimental ex post facto design is implemented after the event and it is often said to be undertaken with the wisdom of hindsight. It is used as the researcher wants to understand and explain an observed relationship between two variables (Rosenthal & Rosnow, 1991).

Ex post facto design is advantageous as it is good for testing and refining theory linked to the current study. It is particularly useful in situations in which the researcher is unable to exercise control, or for the purpose of hypothesis formation. It also entails that the participants make up both the experimental and control group, making the research more 'natural' by creating a real life setting, which helps with generalisability. The role of the researcher in this type of design is essentially as an observer; therefore it is most useful for descriptive and construct-seeking purposes (Rosenthal & Rosnow, 1991). As this research was cross-sectional in nature, all questionnaires were collected at one point in time making the study more economical, time efficient, and cost efficient (Welman & Kruger, 2001).

Having provided the aim and explanation of the research design, the research questions and hypotheses will now be discussed.

5.4. RESEARCH QUESTIONS

5.4.1. Primary Research Questions

1. Is there a relationship between level of exposure to traumatic material and level of Secondary Traumatic Stress in a sample of trauma workers who work with victims of violent crimes?
2. Is there a difference in level of secondary traumatic stress between those trauma workers who have been exposed directly to non-work related trauma than those who have not?
3. Is there a relationship between empathy and secondary traumatic stress in trauma workers who work with victims of violent crimes?
4. Is there a relationship between perceived social support and secondary traumatic stress among trauma workers who work with victims of violent crimes?
5. Is there an interrelationship between secondary traumatic stress, level of exposure, empathy and perceived social support in trauma workers who work with victims of violent crimes?

5.4.2. Secondary Research Questions

6. Is there a relationship between compassion fatigue and vicarious traumatisation?
7. Is there a difference between professional and non-professional trauma workers and the occurrence of secondary traumatic stress in the sample?

These research questions prompted the formulation of particular hypotheses, which were improved and formulated with knowledge and understanding of instruments and statistical procedures required.

5.5. HYPOTHESES

5.5.1. Primary Hypotheses

Hypothesis One: Increased levels of exposure to traumatic material as measured by the Exposure checklist is associated with increased levels of secondary traumatic stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers.

Hypothesis Two: Direct exposure to non-work related trauma increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers.

Hypothesis Three: Increased levels of empathy as measured by The Interpersonal Reactivity Index is associated with increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers.

Hypothesis Four: Increased levels of perceived social support as measured by the Crisis Support Questionnaire is associated with decreased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers.

Hypothesis Five: The trauma workers level of empathy and level of social support act as moderators between level of exposure to traumatic material as measured by Exposure checklist and secondary traumatic stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale.

5.5.2. Secondary Hypotheses

Hypothesis Six: There is a relationship between compassion fatigue as measured by The Compassion Fatigue Self-Test and vicarious traumatization as measured by the Traumatic Stress Institute Belief Scale.

Hypothesis Seven: There is a difference between professional and non-professional trauma workers and their level of secondary traumatic stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale.

The above hypotheses signify the relationships that will be explored in the current study, in support of the theoretical model illustrated in the literature review. The sample, instruments, procedures, ethical considerations and statistical analyses will now be discussed.

5.6. SAMPLE

The target population for the current study is trauma workers who work with victims of violent crime. In order to conduct this research, a non-probability sampling technique was implemented by the researcher based in individuals' availability and willingness to respond. The reason for use of this sample is that it was accessible, and relatively representative of the population, as a range of helpers were sourced.

The trauma workers were sourced from a range of organisations and private practices, in order to get a relatively large sample, and a range of experience and qualifications. The sample was heterogeneous in order to meet the general aims of the research.

In total, the sample for the current study comprised of 64 trauma workers sourced from the Gauteng region. Access to non-professionals (n= 43) was obtained from a variety of organisations (eg. Victim Support groups, the Trauma Clinic, Lifeline, the University of the Witwatersrand Psychology Master Students, churches). Those considered as non-professionals are volunteers who work on a part-time basis as trauma workers, who receive little or no payment for their work, and although they may have received training to some degree, they have not obtained a professional qualification in this area (eg. Masters in Clinical Psychology).

Professional trauma workers (n= 21) were sourced from a variety of private clinical practices across Johannesburg. They were accessed by means of contacts in the field and referrals. Those who were considered to be professional needed to be employed on a full time basis as a counsellor or equivalent, have a professional qualification and receive remuneration for their work.

It's important to note that a range of trauma workers was used to be more representative of the population and to allow for comparisons with regards to variables such as qualification, and level of exposure to traumatic material.

5.7. MEASURES/INSTRUMENTS

All questionnaires administered to gather information were structured self-report scales and were presented as part of a structured questionnaire. This research method allowed participants to describe their own behaviour and state of mind. It was considered to be a beneficial method of data collection for the study as it enabled the researcher to obtain a level of standardisation, the instruments had previously been used with trauma workers and it is relatively short and easily self-administered method (Rosenthal & Rosnow, 1991).

The questionnaire administered tapped into levels of secondary traumatic stress, level of exposure to traumatic material (eg. caseload, qualification, previous trauma history), environmental characteristics (ie. social support) and personal characteristics (ie. empathy). In addition, the questionnaire requested information about demographic characteristics. In order to operationalise the variables involved in the current study the following instruments discussed below were used.

5.7.1. Demographic Questionnaire (SEE APPENDIX B)

The researcher devised a demographic questionnaire in order to determine biographical information of the participants. Demographic variables included the participant's gender, age, race, level of qualification, direct exposure to violent crimes, and length of service as a trauma worker. Gender, age and race are standard variables in a demographic questionnaire and thus were selected to get a more holistic understanding of the sample.

5.7.2. Level of Exposure Checklist (SEE APPENDIX C)

To determine the nature and the frequency with which trauma workers were exposed to violent crimes, participants were asked to indicate, on a self-constructed exposure checklist, the number of times they attended to each type of violent crime during the past three months. The level of exposure checklist is a self-developed instrument based on the Crime Information Analysis Centre (CIAC) classification system of

types of violent crimes (CIAC, 2005). Participants were required to indicate either yes or no to determine which types of violent crimes they had dealt with in the past three months (to give it a time frame). Furthermore to measure the intensity of exposure to the specified violent crime(s), the participants were asked to estimate the average number of times they had dealt with each crime in the past three months (*for definitions of each type of crime refer to APPENDIX H*).

A total score was obtained by totalling the number of yes and no responses, and the frequency of cases which the trauma worker had dealt with. The higher the score the higher the level of exposure.

Finally to be all inclusive other measures of level of exposure such as the length of time they have been employed or have volunteered as a trauma worker, their level of qualification, and if they had experienced previous non-work related trauma were included.

5.7.3. Compassion Fatigue Self-Test (SEE APPENDIX D)

In the current study, the Compassion Fatigue Self-test was used to assess Secondary Traumatic Stress (Figley, 1995). The Compassion Fatigue Self-test was devised by Stamm and Figley in 1996 (Stamm & Figley, 1996). It was designed as an educational tool and warning device and is based on a revised version of Figley's (1995) 40-item Compassion Fatigue Self-Test. The original scale is based on the Impact of Events Scale, which is a widely used measure of PTSD (Stamm & Figley, 1996). Although this instrument has not been developed for the non-professional population it has been successfully used in several South African studies regarding non-professionals (Marinus, 1997; Ortlepp & Friedman, 2001; Wilson, 1998).

The Compassion Fatigue Self-Test is a 66 item measure comprising of three subscales- compassion fatigue, burnout and compassion satisfaction (Stamm & Figley, 1996). As this study only looks at secondary traumatic stress, only those items tapping into compassion fatigue were utilised. Therefore the current scale consists of 23 items.

Participants rated each item on a 6-point Likert scale (0 = never to 5 = very often) how frequently they have experiences characterised by statements such as, “I have flashbacks connected to those I help” and “I have experienced intrusive thoughts of times with especially difficult people I helped”. Pilot tests have showed that by specifying a time frame for this self-report test (eg. "past seven days" or "currently") did not provide an accurate reflection of counsellors experiences. Therefore no time frame is specified (Stamm & Figley, 1996).

According to Stamm and Figley (1996) scoring for Compassion Fatigue subscale should be interpreted as follows:

26 or less =	extremely low risk
27-30 =	low risk
31-35 =	moderate risk
36-40 =	high risk
41 or more =	extremely high risk.

The higher the scores the greater risk factor secondary traumatic stress. It is suggested that the cut-off point for secondary traumatic stress is 31, above which a moderate or severe impact is indicated (Stamm & Figley, 1996).

In terms of its psychometric properties Stamm and Vara (1993) reported that the internal consistency ranges from 0.86 to 0.94 overall. With regards to validity, Stamm & Figley (1996) reported that the subscales have good predictive validity in relation to trauma symptoms (Stamm & Figley, 1996).

In South Africa, Ortlepp and Friedman (2001) used this scale to measure secondary traumatic stress in non-professional trauma workers. However, they did not report any psychometric properties for this scale. In a South African study, Wilson (1997) also used this scale to measure secondary traumatic stress and burnout in trauma counsellors. She reported a high overall reliability of 0.90, and satisfactory reliabilities for the subscales: compassion fatigue (0.80) and burnout (0.85) (Wilson, 1998).

5.7.4. Traumatic Institute Belief Scale (SEE APPENDIX E)

In the current study, the Traumatic Stress Institute Belief Scale (TSI-BLS) was used to measure disruptions in cognitive schemata and thus secondary traumatic stress. The TSI-BLS is based on Constructivist Self Development Theory. It is intended to measure disruptions in beliefs about self and others (e.g. safety, trust, esteem, intimacy and control), which arise from psychological trauma or from vicarious exposure to trauma material through psychotherapy or other helping relationships. This scale makes allowances for vicarious traumatising and can be a measure of secondary traumatic stress (Pearlman, 1996).

The TSI-BLS is made up of 80 items. Participants respond to each item using a 6-point Likert Scale. The scale ranges from 1 (disagree strongly) to 6 (agree strongly) with positive items reversed scored (Dutton *et al*, 1994). Example of items of this scale include “I find myself worrying a lot about my safety” and “You can’t trust anyone”.

Scoring of the TSI- BLS yields a sub-score for each subscale, as well as for the total scale (Dutton *et al*, 1994). The average score is obtained by dividing the total score by the number of items in the scale. Higher scores indicate greater disruptions or negativity in cognitive schemata (Pearlman, 1996). The subscales of this questionnaire were not looked at separately in the study due to space limitations and it was not considered important to the study.

In terms of psychometric properties the overall internal reliability was measured as 0.98 (Dutton *et al*, 1994). Internal consistency of the subscales has been found to be adequate for both student and clinical populations- safety (0.76), self-trust (0.84), self-esteem (0.82 and 0.86 respectively), self-intimacy (0.76 and 0.82 respectively), other trust (0.84 and 0.88 respectively), other-esteem (0.83) and other-intimacy (0.82 and 0.83 respectively) (Dutton *et al*, 1994).

In a study of first year health sciences students within a South African context overall reliability for the TSI-BLS was found to be high (ie. 0.93). The reliability for the subscales ranged from 0.70 to 0.80 (Friedlander, 1999). With regards to professionals, a South African study conducted by Davidson (2001) found the overall internal

consistency of the TSI-BLS to be 0.95. In addition the reliabilities of the subscales ranged from 0.71 to 0.85 (Davidson, 2001).

5.7.5. Crisis Support Questionnaire (SEE APPENDIX F)

Social support was measured using the Crisis Support Questionnaire (CSQ) developed by Joseph, Andrews, Williams, and Yule (1992). This scale was used in order to determine an individual's perception of support available to them after exposure to a traumatic event. Although there are a wide variety of social support scales available, it was applicable to the current study as it has been successfully used with trauma studies in the South African context (Esprey, 1996; Marinus, 1997) and around the world (Joseph *et al*, 1992; Joseph, 1992). In addition it also focuses on elements (eg. different levels of perceived social support) important to the study.

The CSQ is a self-report instrument that consists of 7 items. Participants respond to each item using a 4-point Likert Scale ranging from 1 (never) to 4 (always) with the negative support items reversed scored. Example of items include "Are you able to talk about your thoughts and feelings?" and "are people sympathetic and supportive?". The items in the questionnaire tap the following dimensions of social support: emotional support, practical support, availability of others, contact with others in a similar situation, confiding in others, negative responses received from social support (which could counteract benefits of positive support), and satisfaction with social support (Esprey, 1996; Joseph *et al*, 1992). Positive and negative social support was determined by looking at the questions asked in the scale.

A total score for this scale is obtained by adding up all the items to obtain the overall support rating (ranging from 0 to 28). The higher the score the greater the level of social support as perceived by the participant (Esprey, 1996). In theory higher scores should be associated with lower scores of secondary traumatic stress.

The psychometric properties of the scale include satisfactory internal consistency ranging between 0.69 (Joseph, 1992), and 0.80 (Joseph *et al*, 1991). In a South African study conducted by Esprey (1996) that looked at PTS symptoms and exposure to violence, the CSQ had an overall high internal consistency of 0.79 (Esprey, 1996). In Jacobs (2002) study that looked at direct and indirect consequences

of trauma on South African university students the reliability of the CSQ was 0.73 (Jacobs, 2002).

A previously criticised aspect of this scale is that it failed to ask the source of the emotional and instrumental support. As this information is important to this study Esprey's (1996) modified version was used. In a study using a South African sample Esprey (1996) modified the CSQ to include questions pertaining to the source of perceived support for example 'Who is willing to listen?' and 'Who is helpful'. These support resources include parents, friends, spouses, colleagues, and therapists (Esprey, 1996). Simple statistics are used to calculate the frequencies of responses. As more than one type of source of support can be indicated, the frequency of each source is calculated separately. This provides a general idea of the support networks available.

The CSQ and Esprey's (1996) modified version have been used successfully with other measures of trauma (Joseph *et al.*, 1992; Esprey, 1996; Jacobs, 2002; Ortlepp & Friedman, 2001).

5.7.8. Interpersonal Reactivity Index (IRI) (SEE APPENDIX G)

In order to assess empathy as a multidimensional construct, the Interpersonal Reactivity Index (IRI) developed by Davis (1980) was used. This scale consists of 28 items, which incorporates both cognitive and emotional dimensions scored on a 5-point Likert scale ranging from 0 (does not describe me well) to 4 (describes me very well), with some items reverse scored. This scale consists of four subscales, two cognitive and two emotional: Perspective Taking, Fantasy, Empathic Concern, and Personal Distress (Atkins & Steitz, 1998).

The cognitive factor of this scale is perspective taking and fantasy. Perspective taking looks at an individual's reported tendency to adopt the psychological point of view of another. It involves shifting from a self-oriented reaction, to others' distress, to other-oriented reaction (Atkins & Steitz, 1998). This relates to Figley's empathetic ability. An example of an item that taps into the trauma workers empathetic ability is "I sometimes try to understand my friends better by imagining how things look from their perspective".

Fantasy assesses the ability to transpose imaginatively into the feelings and action of fictitious characters. Figley (1995) suggests that those who suffer from secondary traumatic stress will encounter re-experiences, in fantasy, of the traumatic event that occurred to the victim (Figley, 1995). Although fantasy measured by this scale does not correspond to Figley's ideas about fantasy it was still included as it is not legitimate to exclude.

The emotional factors of this scale include empathic concern and personal distress. Empathic Concern is defined by regard for another's feelings (eg. "I am often quite touched by things that I see happen"). Personal Distress is the response to difficult interpersonal situations of others. Personal Distress involves the experiences of another's distress as if it were one's own (Atkins & Steitz, 1998). For example "Being in a tense emotional situation scares me". These two forms of empathy relate to Figley's empathetic concern and empathetic response respectively.

A total score for this scale is obtained by adding up all the items to obtain the overall level of empathy (ranging from 0 to 84). The higher the score the greater the participants level of empathy. In theory higher levels of empathy should be associated with high scores of secondary traumatic stress. The subscales on the IRI were not discussed separately as they were not individually relevant to the study.

Davis (1980) found the internal consistencies of the four dimensions of empathy to range from 0.68 to 0.79 with males 0.82, females 0.82 (fantasy); males 0.79, females 0.76 (empathetic concern); males 0.77, females 0.76 (Perspective Taking); and males 0.83, females 0.79 (Personal Distress) (Atkins & Steitz, 1998).

Although the IRI has not been used in South Africa, to the researchers knowledge it is the only multidimensional instrument being used in research in order to better understand people and their capabilities of 'caring'. It has also been used successful with concern to secondary traumatic stress (Atkins & Steitz, 1998).

5.8. PROCEDURE

Once the Ethics Board at the University of the Witwatersrand had granted ethical clearance for the current study, verbal permission was obtained from the directors of

the relevant organisations in order to distribute the questionnaires to the non-professional trauma workers. The professional trauma workers were contacted telephonically and verbal permission was obtained.

All trauma workers were approached at a time that had been arranged by the organisation or individually. They were given a brief introduction to the study, told that it is voluntary and that it is entirely confidential and anonymous. Furthermore they were told that it will take fifty minutes of their time to complete the questionnaire, and that they could discontinue at any point if at all they felt uncomfortable.

Questionnaires were administered to those interested, this included a subject information sheet informing the participants about the study, and their rights if they chose to participate in the study (REFER TO APPENDIX A). It also provided the researchers contact details if participants felt that counselling was needed or they wanted feedback. A box was provided at each organisation where questionnaires could be returned. A few participants requested that the questionnaire should be emailed to them and they would email back to their director who in turn would email it to the researcher thereby retaining the participant's anonymity. They were made aware that in using this method the director would have access their questionnaires and therefore confidentiality could not be guaranteed.

Once they had voluntarily consented to participate, participants completed the questionnaires at their own leisure. The completed questionnaires were placed in boxes at the relevant organisation or returned via email. In total, 200 questionnaires were distributed amongst the trauma workers. From these 64 were returned, yielding an overall response rate of 32%. Once a significant number of questionnaires were completed the data was captured on Microsoft Excel and then analysed using SAS. Findings and conclusions were subsequently written up. At the end of the study the organisations or individuals who requested feedback were provided with a report indicating significant findings of the study.

5.9. ETHICAL CONSIDERATIONS

Ethics is an important concept for all studies as it protects the participants, the institution that has allowed the research to be conducted, and the researcher/s involved. Before commencing the study ethical clearance was obtained from the University Ethics Committee for clearance involving human subjects. To conduct the study in an ethical manner the following measures were carried out.

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. Participants 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. However in filling out the questionnaire they were giving their consent to participate in the study.

With regards to their responses participants were guaranteed anonymity, as no identifying details were asked, as well as confidentiality, as no one except the researcher captured their responses (though if emailed the director also had access). There were no physically invasive features to the study, however due to the nature of the study and the risk of emotional distress, the participants were informed that they could obtain from the researcher relevant numbers and services for counselling if needed (REFER TO APPENDIX A).

5.10. STATISTICAL DATA ANALYSES

The statistical procedures that were used to analyse the data and answer the research questions are briefly outlined below.

5.10.1. Parametric Assumptions

In order to use the following statistics- Pearson correlation coefficients, a two-sample t-test and a moderated multiple regression- certain statistical methods parametric tests need to be conducted. Parametric tests are based on certain assumptions about the population and its parameters. If parametric assumptions are not met, non-parametric tests need to be conducted. Two important assumptions include normality, and homogeneity.

Normality means that scores obtained from the sample are normally distributed around the mean. Thus, if we were to obtain the whole population of observations, the resulting distribution would closely resemble this. If the sample is large enough normality can usually be assumed in connection to the central limit theorem. Homogeneity of variance refers to whether or not variances are equal (Howell, 2002). Tables are not presented due to space constraints.

5.10.2. Internal Reliability: Cronbach's Alpha

Cronbach's alpha is computed to determine the reliability of each of the scales and subscales used in the study. Cronbach's Alpha is an important measure of internal consistency in scales. It serves as indications of the internal consistency of instruments, and therefore offers an indication of test reliability. This enables the researcher to know if the variables employed in this study were measured accurately. Rosenthal and Rosnow (1991) states that 0.60 is an adequate level of reliability (Rosenthal & Rosnow, 1991).

5.10.3. Descriptive Statistics

Descriptive statistics were used to give a sense of the sample in the study. It was also used to indicate means, standard deviations and frequencies were conducted on significant variables. This was done in order to provide a description of various aspects and characteristics of the data gathered.

5.10.4. Pearsons Correlation Coefficient

To answer the first, third, fourth and fifth hypotheses, Product-Moment Correlation Coefficients were used to explore the relationship between the participant's level of exposure and secondary traumatic stress scores; empathy and secondary traumatic stress scores; and social support and secondary traumatic stress scores, and between the compassion fatigue self test and the TSI-BLS, respectively. The correlation coefficient served as an index of strength and direction of the relation. It is important to stress that significant correlations does not indicate causation, but shows the relationship between variables (Rosenthal & Rosnow, 1991).

5.10.5. Moderated Multiple Regression

Hypothesis six looks at the interrelationship between the variables in the model. In order to do this a moderated multiple regression was conducted to explore social support and empathy as possible moderators of secondary traumatic stress.

The following equation was used for this analysis:

$$y = \beta_0 + \beta_1 X + \beta_2 (\text{moderator}) + \beta_3 (\text{moderator}) X + E$$

Where y was the relationship to be examined, E was the error and β_0 was the intercept.

Moderation implies that “the causal relation between two variables changes as a function of the moderator variable. The statistical analysis must measure and test the differential effect of the independent variable on the dependent variable as a function of the moderator” (Baron, & Kenny, 1986, p. 1174). **Figure 6** depicts this concept:

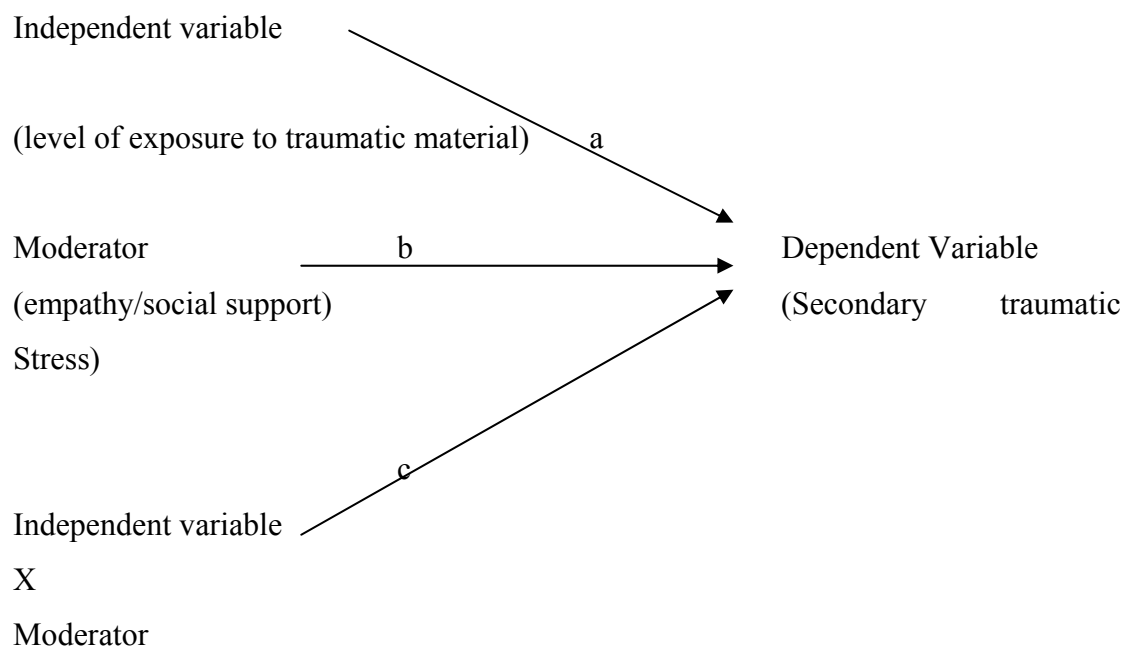


Figure 6: Model of Moderator effect (adapted from Baron and Kenny, 1986)

The model in figure 6 has three causal paths (a, b and c) that feed into the outcome variable of secondary traumatic stress: namely the level of exposure to traumatic material as a predictor (path a), the level of empathy/social support as a moderator (path b), and the interaction of these two products (path c). According to Baron and

Kenny (1986) the moderator hypothesis holds up if the interaction between the independent variable (level of exposure to traumatic material) and the moderator (empathy/social support) (path c) is significant. There may also be significant main effects for level of exposure to traumatic material and level of empathy/social support (path a and path b), but it is not directly important conceptually to testing the moderator hypothesis. In addition Baron and Kenny (1986) state that moderator variables always function as independent variables (Baron & Kenny, 1986). In the present study both moderating variables are also independent variables.

5.10.6. Two Independent Sample T-Test

In order to determine whether there was any significant difference between professionals and non-professionals; a Two Independent Sample T-Test was used between the trauma workers qualification (independent variable) and secondary traumatic stress scores (dependent variable). Similarly, this was also conducted to determine whether there was any significant difference between direct exposure and no direct exposure to non-work related trauma. T-tests are the most common method in behavioural sciences that is used to compare the means of two groups (Rosenthal & Rosnow, 1991).

5.11. CONCLUDING COMMENTS

This chapter intended to clarify the aim and purpose of this study and outline the research questions. It went on to give the hypotheses of the study, the research design, to describe the sample of the study, measuring instruments used, the procedure, ethical considerations and the statistical analyses that were employed. The results of the statistical analyses are presented in Chapter Seven.

CHAPTER SIX:

RESULTS

6.1. INTRODUCTION

This chapter discusses the results of the statistical analyses, including descriptive features and those findings pertaining to the hypotheses. In this chapter the following sections are examined: reliabilities of scales; descriptive statistics; statistics regarding the primary and secondary hypotheses. All results are discussed and considered significant from the 5% level of significance.

6.2. RELIABILITIES OF MEASURING INSTRUMENTS

Cronbach Alpha (also known as alpha coefficient) is a measure of the internal consistency of an instrument. A high internal consistency is important as it implies a high degree of generalisability across the items within the instrument (Welman & Kruger, 2001). The Cronbach alpha coefficients for level of exposure checklist; the Compassion Fatigue Self-test; the TSI Belief Scale; the Crisis Support Questionnaire and the Interpersonal reactivity Index are presented in Tables 1.1; 1.2; 1.3., 1.4 and 1.5, respectively.

6.2.1. Level of Exposure

Table 1.1. Cronbach alpha coefficient for the Level of Exposure

Cronbach Alpha	
Level of exposure	0.87

Table 1.1. Illustrates the Cronbach alpha for the level of exposure checklist. The reliability of this scale is shown to be 0.87, which is a high level of reliability.

6.2.2. Compassion Fatigue Self-Test

Table 1.2. Cronbach alpha coefficient for Compassion Fatigue

Cronbach Coefficient Alpha	
Compassion Fatigue	0.85

Table 1.2. Indicates that the reliability of the Compassion Fatigue Self-Test subscale compassion fatigue is 0.85, which is a high level of reliability. A high reliability implies that the items in this instrument measure the same attribute (Welman & Kruger, 2001).

6.2.3. TSI Belief Scale

Table 1.3. Cronbach alpha coefficients for TSI Belief Scale

Cronbach Coefficient Alpha	
TSI-BLS TOTAL	0.84
Self-safety	0.85
Other –safety	0.85
Self-trust	0.86
Other-trust	0.85
Self-esteem	0.85

Other-esteem	0.85
Self-intimacy	0.85
Other-intimacy	0.86
Self-control	0.85
Other-control	0.85

Table 1.3. Shows that the overall reliability of the TSI-BLS is 0.84, which is a high level of reliability. The reliabilities of the subscales ranged from 0.85 to 0.86 which are all high levels of reliability (Rosenthal & Rosnow, 1991).

6.2.4. Crisis Support Questionnaire

Table 1.4. Cronbach alpha coefficients for Crisis Support Questionnaire

Cronbach Coefficient Alpha	
CSQ	0.89

Table 1.4. Indicates that the reliability of the Crisis Support Questionnaire is 0.89, which is a high level of reliability.

6.2.5. Interpersonal Reactivity Index

Table 1.5. Cronbach alpha coefficients for Interpersonal Reactivity Index

Cronbach Coefficient Alpha	
IRI TOTAL	0.84
Perspective taking	0.87
Fantasy	0.85

Empathetic Concern	0.86
Personal Distress	0.85

Table 1.5. indicates that the overall reliability of the IRI is 0.084, which is a high level of reliability. The internal consistencies of the subscales are: Perspective Taking (0.87), Personal Distress (0.85), Empathetic concern (0.86), and Fantasy (0.85), which are all also high levels of reliability (Rosenthal & Rosnow, 1991).

6.3. DESCRIPTIVE STATISTICS

Descriptive statistics for the sample and variables in this study are presented in the following section. Rosnow and Rosenthal (1996) define descriptive statistical analysis as the statistical techniques used to calculate population values. This study uses the following descriptive analysis: frequencies, percentages, means (the average of a set of scores), standard deviations (an indicator of the variability of a set of data around the mean value in a distribution), and minimum and maximum scores (the smallest and largest score that the sample obtained) (Rosenthal & Rosnow, 1991; Welman & Kruger, 2001).

6.3.1. Demographic Details of the Participants

Demographic descriptions of the sample grouping are presented in tables 2.1. and 2.2. This is followed by information regarding participant's experiences with trauma counselling (table 2.3)

Table 2.1. Demographic Characteristics of all Participants in the Sample

Variables	n	Percentage
Gender		
Males	11	17.19
Females	53	82.81
Race		
Black	10	15.23

White	46	71.88
Indian	8	12.50

Table 2.2 Age of participants in the sample

Variable		Mean	Standard Deviation	Minimum	Maximum	Median
Age	64	36.9531250	11.0832774	23.0000000	62.0000000	34.0000000

Table 2.1 and 2.2. presents the descriptive statistics of the participants. Results showed that the participant's ages ranged from 23 to 62 years old with a mean age of 37. The participants comprised of both males (n=11) and females (n=53). The overall sample reflects mostly white, female grouping, however it is still representative as currently those who are involved in the social sciences are largely white and from the female domain.

Table 2.3. Participants Experience with Trauma counselling

Experience of Trauma workers; N=64		
Variables	n	Percentage
Qualification		
Professional	21	32.81
Non-professional	43	67.19
Years of Experience (approximation)		
1 year	20	31.25
2 years	18	28.13
3 years	7	10.94
4 years	5	7.81

> 5 years	14	21.88
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Table 2.3. shows that the majority of the sample were non-professionals (66%) and only 34% were professionals. Years of counselling experience ranged from approximately 1 year to 15 years, with the mean being 3.31 years.

6.3.2. Means, Standard Deviations and Minimum and Maximum Scores

Statistics of the means, standard deviations and minimum and maximum scores for each scale utilised in the current study are presented below.

Table 3: Means, Standard Deviations and Minimum and Maximum Scores

Variable	N	Mean	Standard Deviation	Minimum	Maximum
CF	64	26.09	14.12	0	64.00
TSI-BLS	64	112.94	36.89	23.00	210.00
CSQ	64	20.98	3.68	13.00	28.00
IRI	64	65.56	9.74	42.00	87.00
CASELOAD	64	28.73	25.67	2.00	121.00
PREVIOUS	64	1.50	0.50	1.00	2.00

Table 3 shows the scoring of compassion fatigue scale to range from a minimum score of 0 to a maximum score of 64. The average mean was 26.09 while the standard

deviation was 14.12. The TSI-BLS total scores ranged from 23 to 210 with a mean of 112.84 and a standard deviation of 36.89. Scoring on the CSQ ranged from a minimum score of 13 to a maximum score of 28, with a mean of 20.98 and a standard deviation of 3.68. The minimum score of IRI was 42 and the maximum score was 87. The mean was 65.56 with a standard deviation of 9.74. Lastly, for exposure, the average amount of caseloads was 28.73 (over a 3 month period), with a standard deviation of 25.67. Scores ranged from a minimum of 2 to a maximum of 121. With regards to previous non-work related exposure to violent crime scores ranged from 1 to 2, with a mean of 1.50 and a standard deviation of 0.50.

6.3.3. Levels of Secondary Traumatic Stress

In order to get a general sense of the level of secondary traumatic stress experienced by the sample, table 4.1 reflects the frequency and the percentage of participant's level of compassion fatigue and table 4.2. reflects the frequency and the percentage of participant's level of vicarious traumatization.

6.3.3.1. Compassion Fatigue

Table 4.1. Levels of Secondary Traumatic Stress as measured by the Compassion Fatigue Scale

Compassion Fatigue		
	Frequency	Percentage
Extremely low risk	38	59.38
Low risk	8	12.5
Moderate risk	5	7.81
High risk	2	3.13
Extremely high risk	11	17.19

Table 4.1. shows that the majority of trauma workers displayed relatively low scores on the compassion fatigue subscale (72%), with only 28% of the sample meeting the

criteria for compassion fatigue, using the recommended cut-off point for secondary traumatic stress which is 31 (Stamm & Figley, 1996).

6.3.3.2. Vicarious Traumatization

Table 4.2. Levels of Secondary Traumatic Stress as measured by the TSI-BLS

TSI-BLS		
	Frequency	Percentage
Below cut-off score	45	70.31
Above cut-off score	19	29.69

Table 4.2. indicates that 70% of the sample are below the cut-off levels for significant traumatization. Thus this leaves only 30% of the participants at risk of secondary traumatic stress according to the cut-off score.

6.3.4. Types of Violent Crime

The breakdown of the crime experienced by the trauma workers in their work as trauma counsellors is illustrated in table 5.1. This includes the number of participants that have dealt with each type of crime (ie. each crime is out of 64) and the frequency for that crime.

Table 5.1. Frequencies of the Types of Exposure to Violent Crimes

Types of Violent Crime	Number of participants	Percentage
Hijacking/Carjacking	45	70.31
Common Robbery	46	71.88
Robbery with aggravated circumstances	36	56.25
Mugging	24	37.50
Rape	25	39.06

Indecent Assault	11	17.19
Child Molestation	11	17.19
Domestic Violence	35	54.69
Assault with the intent to inflict grievous bodily harm	20	31.25
Common Assault	26	40.63
Attempted Murder	1	1.56
Murder	7	10.94
Kidnapping/abduction	6	9.38
Burglary	44	68.75
Other	13	20.31

Table 5.1. illustrates the types of violent crimes dealt with by the participants and the extent to which each violent crime has been dealt with over the past three months. Common robbery (72%) was the most frequent crime that the participants encountered followed closely by hijackings (70%) and then burglary (69%). It appears that attempted murder (2%) is the least frequent crime encountered by the participants.

The trauma workers themselves are not immune to becoming a victim of violent crime. Table 5.2. presents the frequency and percentage of those trauma workers who have experienced non-work related trauma and those who have not.

Table 5.2. Direct exposure to non-work related violent crime experienced by the participants

Exposure to previous direct trauma	N	Frequency	Percentage
Yes	64	32	50

No	64	32	50
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The above table illustrates that in the trauma workers personal lives there was an even split between those participants who had been a previous victim of violent crime (50%) and those who had never been a victim of violent crime (50%).

6.3.5. Sources of Perceived Social Support

Participants were asked to indicate who they are able to talk to about their thoughts and feelings, who listens to their problems, and who is supportive/unsupportive. Simple statistics were used to calculate the frequencies of responses. As more than one type of source of support was indicated, the frequency of response to each source was calculated separately (ie. each source out of 64). The frequency of responses to these items are outlined in table 6.1 (positive support) and 6.2 (negative support), this helps to get a general idea of the support networks available to trauma workers.

Table 6.1. Frequencies of sources of perceived positive support

POSITIVE SUPPORT		
TYPES OF PERCEIVED SUPPORT	Number of participants out of 64 for each source of support	Percentage
Family	53	82.81
Significant Other	38	59.38
Friend(s)	56	87.5
Colleague(s)	31	48.44
Therapist	14	21.88
Supervisor	8	12.5

Table 6.1. lists the sources of perceived positive support. The majority received positive support from their friends (88%) and family (82%), while the least positive support was received from ones supervisor (13%) and therapist (22%).

The CSQ contained a question which looked at sources of potential negative support. Table 6.2. illustrates at the types of perceived negative support as indicated by the participants.

Table 6.2. Frequencies of sources of perceived negative support

NEGATIVE SUPPORT			
TYPES OF PERCEIVED SUPPORT	Number of participants out of 64 for each source of support	Percentage	
Family	27	42.19	
Significant Other	13	20.31	
Friend(s)	23	36.94	
Colleague(s)	9	14.06	
Therapist	0	0	
Supervisor	3	4.69	

Table 6.2. lists the sources of perceived negative support. Participants indicated that family (42%) and friends (37%) as their greatest source of negative support.

6.4. STATISTICAL ANALYSES RELATING TO PRIMARY HYPOTHESES

6.4.1. Hypothesis One: Increased levels of exposure to traumatic material as measured by the Exposure checklist is associated with increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers

In order to investigate the above hypothesis Pearsons Correlations were carried out, with the participants caseload representing the level of exposure (independent variable) and TSI-BLS scores and Compassion Fatigue scores measuring the level of secondary traumatic stress (dependant variables). A positive correlation between variables indicates an association; however it should at no time be seen as implying causation (Rosenthal & Rosnow, 1991). This point is stressed throughout the whole study.

Table 7: Correlation between Caseload as measured by the Exposure Checklist and Secondary Traumatic Stress as measured by the TSI-BLS and the Compassion Fatigue Self Test

Pearson Correlation Coefficients, N = 64	
Prob > r under H0: Rho=0	
	CASELOAD
TSI TOTAL	0.07684
CF	-0.07012

* $p < 0.05$

Results on table 7 indicates that there is insufficient evidence to support any relationship between caseload as a level of exposure and TSI-BLS scores ($r=0.08$; $p>0.05$) or caseload as a level of exposure and compassion fatigue scores ($r= -0.07$; $p>0.05$). In other words there is no significant correlation between caseload and measures of secondary traumatic stress.

6.4.2. Hypothesis Two: Direct Exposure to non-work related trauma increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers

To investigate the above hypothesis, a two-independent sample t-test was carried out with previous non-work related exposure as the independent variable, and the TSI-

BLS scores as the dependant variable; and again with the compassion fatigue scores as the dependant variable.

Table 8.1. Two Independent Sample T-Test between previous direct exposure to non-work related trauma and Secondary Traumatic Stress as measured by the TSI and compassion fatigue scales

Two Independent Sample T-Test				
Variable	Method	Variances	DF	t Value
TSI TOTAL	Pooled	Equal	62	1.92*
TSI TOTAL	Satterthwaite	Unequal	61.9	1.92*
CF	Pooled	Equal	62	3.97*
CF	Satterthwaite	Unequal	52.6	3.97*

* $p < 0.05$

Results presented in Table 8.1. show that there was a significant difference between TSI-BLS scores and previous exposure to violent crime ($t(62) = 1.92$; $p < 0.05$). Similar results were obtained using the compassion fatigue Self Test ($t(62) = 3.97$; $p < 0.05$).

Table 8.2. Means for previous direct exposure to non-work related trauma as measured by the TSI and compassion fatigue scales

Variable	Direct exposure	N	Mean	Std Dev	Minimum	Maximum
TSI TOTAL	previous	32	121.63	6.5397	54	210
TSI TOTAL	no	32	104.25	6.2295	23	168
CF	previous	32	32.406	15.155	11	64

Variable	Direct exposure	N	Mean	Std Dev	Minimum	Maximum
TSI TOTAL	previous	32	121.63	6.5397	54	210
CF	no	32	19.781	9.6611	0	39

Table 8.2. elaborates these findings and shows that those trauma workers who have been a previous victim of crime scored higher on the compassion fatigue scale (mean= 32.41) and the TSI-BLS (mean= 121.63) than those who had not been a previous victim (CF mean= 19.78; and TSI-BLS mean= 104.25).

6.4.3. Hypothesis Three: Increased levels of empathy as measured by The Interpersonal Reactivity Index is associated with increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers

In order to test the above hypothesis, a Pearsons Correlation Coefficient was carried out between scores on the IRI and scores on the TSI-BLS; and scores on the IRI and scores on the compassion fatigue self-test.

Table 9: Correlation between Empathy as measured by the IRI and Secondary Traumatic Stress as measured by the TSI-BLS and the Compassion Fatigue Self Test

Pearson Correlation Coefficients, N = 64 Prob > r under H0: Rho=0	
	IRI TOTAL
TSI TOTAL	0.32990*
CF	0.40484*

* p < 0.05

Table 9 indicates that there was a moderate, positive statistically significant relationship between IRI scores and scores on the TSI-BLS ($r= 0.33$; $p<0.05$). Similarly there was a moderate, positive, statistically significant correlation between IRI scores and scores on the Compassion Fatigue Scale ($r= 0.41$; $p<0.05$).

6.4.4. Hypothesis Four: Increased levels of perceived social support as measured by the Crisis Support Questionnaire is associated with decreased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers.

The above hypothesis was assessed using a Pearson's Correlation Coefficient. Results obtained are presented in table 10.

Table 10: Correlation between Level of Perceived Social Support as measured by the CSQ and Secondary Traumatic Stress as measured by the TSI-BLS and the Compassion Fatigue Self Test

Pearson Correlation Coefficients, N = 64 Prob > r under H0: Rho=0	
	CSQ TOTAL
TSI TOTAL	-0.36193*
CF	-0.28465*

* $p < 0.05$

Table 10 shows that there is a moderate, negative, statistically significant relationship between the participants social support and TSI-BLS scores ($r= - 0.36$; $p<0.05$). With reference to the compassion fatigue Self Test there was a weak, negative, statistically significant relationship between the participants social support and compassion fatigue scores ($r= - 0.28$; $p<0.05$).

6.4.5. Hypothesis Five: The trauma workers level of empathy and level of social support act as moderators between level of exposure to traumatic material as

measured by Exposure checklist and secondary traumatic stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale

To determine the interrelationship between the variables of the study a Moderated Multiple Regression was used. As there was insufficient evidence to support any relationship between caseload (as a measure of level of exposure) and secondary traumatic stress, previous direct exposure to non-work related trauma was used as a measure of level of exposure.

In order to do this analysis, level of exposure was the independent variable, scores on the Compassion Fatigue self test and scores on the TSI-BLS were the dependent variables, and level of empathy and level of social support acted as the moderators.

6.3.5.1. Empathy

(i) Compassion Fatigue Self Test

Table 11.1. Empathy: Moderating the effects for Compassion Fatigue

Parameter Estimates				
Variable	DF	Parameter Estimate	Standard Error	t Value
Intercept	1	-55.44789	25.83644	-2.15*
PREVIOUS	60	32.53627	17.40162	1.87
IRI TOTAL	60	1.56136	0.39409	3.96*
IRI_PREV	60	-0.70289	0.26474	-2.65*

* $p < 0.05$

Table 11.1 shows that empathy was found to moderate the relationship (interaction) between previous exposure to trauma and compassion fatigue ($t(60) = -2.65$) at a 5% significance level.

Table 11.2. Strength of the Regression

Root MSE	10.76	R-Square	0.45
Dependent Mean	26.09	Adj R-Sq	0.42
Coeff Var	41.23		

Table 11.2. shows that the strength of the regression to be 45% ($R^2 = 0.45$), which represents as strong strength.

In order to explore this relationship more in depth, empathy was separated into three levels- low, medium and high- representing the 25th, 50th and 75th percentile respectively. Summary table of means for these calculations are presented in table 11.3.

Table 11.3. Summary Table of Means for the interrelationship between empathy as measured by the IRI and level of secondary traumatic stress as measured by the Compassion Fatigue Self Test

Empathy Level	Previous Trauma	Intercept	PREV	IRI TOTAL	IRI_PREV	CF
Low	Yes	-55.45	32.54	93.68	-42.17	28.60
Med	Yes	-55.45	32.54	102.27	-46.04	33.32
High	Yes	-55.45	32.54	110.86	-49.91	38.04
Low	No	-55.45	65.07	93.68	-84.35	18.96
Med	No	-55.45	65.07	102.27	-92.08	19.82
High	No	-55.45	65.07	110.86	-99.81	20.67

The above table shows that for those who have been a previous victim of crime, the higher their level of empathy (mean= 110.86) the higher they will score on the compassion fatigue self test (mean= 38.04). Those who have not been a previous victim of crime did not differ significantly in their level of empathy and compassion

fatigue. In addition they scored much lower on the compassion fatigue self test (mean= 20.67).

(ii) TSI Belief Scale

Table 11.4. Empathy: Moderating the effects for Vicarious Traumatism

Parameter Estimates				
Variable	DF	Parameter Estimate	Standard Error	t Value
Intercept	1	-48.95879	81.17394	-0.60
PREVIOUS	60	61.12446	54.67308	1.12
IRI TOTAL	60	2.92313	1.23818	2.36*
IRI_PREV	60	-1.22444	0.83178	-1.47*

* $p < 0.05$

Table 11.4. shows that empathy was found to moderate the relationship between previous exposure to trauma and vicarious traumatism ($t(60) = -1.47$) at a 5% significance level.

Table 11.5. Strength of the Regression

Root MSE	33.80	R-Square	0.20
Dependent Mean	112.94	Adj R-Sq	0.16
Coeff Var	29.93		

The strength of regression as illustrated by the above table is 20% ($R^2 = 0.20$), which is a moderate strength.

In order to explore this relationship more in depth, empathy was separated into three levels- low, medium and high- representing the 25th, 50th and 75th percentile respectively. Summary table of means for these calculations are presented in table 11.6.

Table 11.6. Summary Table of Means for the interrelationship between empathy as measured by the IRI and level of secondary traumatic stress as measured by the TSI-BLS

Empathy	Prev Trauma	Intercept	PREV	IRITOTAL	Iri_prev	TSI
Low	Yes	-55.45	32.54	175.39	-73.47	79.01
Med	Yes	-55.45	32.54	191.47	-80.20	88.35
High	Yes	-55.45	32.54	207.54	-86.94	97.70
Low	No	-55.45	122.25	175.39	-146.93	95.26
Med	No	-55.45	122.25	191.47	-160.40	97.86
High	No	-55.45	122.25	207.54	-173.87	100.47

The above table shows that for those who have been a previous victim of crime the higher their level of empathy (mean ranged from 175.39 to 207.54) the higher they would score on the TSI-BLS (mean= ranged from 79.01 to 97.70). Those who had not been a previous victim as their empathy increased so did scores on the TSI-BLS but not that significantly.

6.3.5.2. Social Support

(i) Compassion Fatigue Self Test

Table 11.7. Social Support: Moderating the effects for Compassion Fatigue

Parameter Estimates				
Variable	DF	Parameter Estimate	Standard Error	t Value

Parameter Estimates				
Variable	DF	Parameter Estimate	Standard Error	t Value
Intercept	1	24.68	28.28	0.87
PREVIOUS	60	12.17	18.75	0.65
SOCIAL TOTAL	60	0.90	1.36	0.66
SOCIAL_PREV	60	-1.12	0.88	-1.28

* $p < 0.05$

Table 11.7. shows that social support was not found to be a moderator between previous exposure to crime and compassion fatigue ($t(60) = -1.28$) at a 5% significance level. No further analysis is required.

(ii) TSI Belief Scale

Table 11.8. Social Support: Moderating the effects for Vicarious traumatisation

Parameter Estimates				
Variable	DF	Parameter Estimate	Standard Error	t Value
Intercept	1	102.96	77.69	1.33
PREVIOUS	60	54.72	51.50	1.06
SOCIAL TOTAL	60	1.38	3.72	0.37
SOCIAL_PREV	60	-3.17	2.41	-1.31

* $p < 0.05$

The above table indicates that there is no significant interaction between social support and previous exposure. Social support was not found to be a moderator between previous exposure to crime and vicarious traumatisation ($t(60) = -1.31$) at a 5% significance level. No further analysis is required.

As the above results were non-significant, the presence of multicollinearity may have influenced these findings. In order to deal with this problem a stepwise regression was conducting. Results are presented in table 11.9.

Table 11.9. Stepwise regression to account for multicollinearity

Collinearity Diagnostics (intercept adjusted)					
Number	Eigenvalue	Condition Index	Proportion of Variation		
			PREV	SOCIALTOTAL	Soc_prev
1	2.19643	1.00000	0.00441	0.00897	0.00384
2	0.79336	1.66388	0.00992	0.08809	0.00018580
3	0.01021	14.66575	0.98568	0.90294	0.99597

The above table indicates a score of 14.67 on the condition index. This suggests that the results may have been affected by multicollinearity.

6.5. STATISTICAL ANALYSES RELATING TO SECONDARY HYPOTHESES

6.5.1. Hypothesis Six: There is a relationship between compassion fatigue as measured by The Compassion Fatigue Self-Test and vicarious traumatisation as measured by the Traumatic Stress Institute Belief Scale

Two scales that measured secondary traumatic stress (ie. compassion fatigue self test and the TSI-BLS) were employed in this study as measures of secondary traumatic

stress. In order to determine whether Compassion Fatigue scores and TSI Belief scale scores reflect similar levels of secondary traumatic stress, and therefore measuring similar aspects of secondary traumatic stress, a Pearson's Product-Moment Correlation Coefficient was carried out. Results obtained are presented in Table 12.

Table 12: Correlation between Compassion Fatigue Self-Test and TSI Belief Scale

Pearson Correlation Coefficients, N = 64	
Prob > r under H0: Rho=0	
	Compassion Fatigue
TSI-BLS	0.64*

* $p < 0.05$

Table 12 shows a positive statistically significant ($p < 0.05$) correlation between Compassion fatigue scores and TSI-BLS scores ($r = 0.64$). This calculation indicates that there is a direct, strong relationship between the scales, suggesting that these scales are measuring overlapping constructs (ie. assessing related aspects of secondary traumatic stress).

6.5.2. Hypothesis Seven: There is a difference between professional and non-professional trauma workers and their level of secondary traumatic stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale

In order to determine whether there was a difference between professional and non-professional trauma workers and the occurrence of secondary traumatic stress in the sample, a two-independent sample t-test was carried out with the participant's qualification as the independent variable and the TSI-BLS scores as the dependant variable; and again with the compassion fatigue scores as the dependant variable. This helps establish whether a factor (ie. qualification) impacts on the participant, resulting

in a difference between means of both groups with regards to a particular score (eg. score on TSI-BLS or on compassion fatigue self-test).

Table 13.1. Two Independent Sample T-Test between Qualification and Secondary Traumatic Stress

Two Independent Sample T-Test				
Variable	Method	Variances	DF	t Value
TSI TOTAL	Pooled	Equal	62	-1.58
TSI TOTAL	Satterthwaite	Unequal	31.4	-1.43
CF	Pooled	Equal	62	-0.43
CF	Satterthwaite	Unequal	32.8	-0.40

* $p < 0.05$

Results presented in Table 13.1. showed that there was no significant difference between TSI-BLS scores ($t(62) = -1.58$; $p > 0.05$) and qualification (professional and non-professional). And no significant difference between compassion fatigue scores ($t(62) = -0.40$; $p > 0.05$) and qualification. As a result of these findings means were computed for professional and non-professional secondary traumatic scores.

Table 13.2. Table of means for qualification and secondary traumatic stress as measured by the TSI and compassion fatigue scales

Variable	QUALIFICATION	N	Mean	Std Dev	Minimum	Maximum
TSI TOTAL	Non- professionals	43	107.91	32.614	53	210
TSI TOTAL	Professionals	21	123.24	43.451	23	172

Variable	QUALIFICATION	N	Mean	Std Dev	Minimum	Maximum
TSI TOTAL	Non- professionals	43	107.91	32.614	53	210
CF	Non- professionals	43	25.558	13.043	3	64
CF	Professionals	21	27.19	16.403	0	54

Table 13.2. indicates that non-professionals (mean= 107.91) scored very similarly on the TSI-BLS to professionals (mean= 123.24), suggesting that they both experience similar levels of vicarious traumatisation. Similarly, non-professionals (mean= 25.56) scored very similarly on the compassion fatigue self test to professionals (mean= 27.19), suggesting that they both experience similar levels of compassion fatigue.

6.6. CONCLUDING COMMENTS

The present study explored the relationships between the level of exposure and secondary traumatic stress, level of empathy and secondary traumatic stress, and the level of social support and secondary traumatic stress, in order to determine whether there were any statistically significant relationships. It also looked at the differences in secondary traumatic stress between those who have been directly exposed to non-work related trauma and those who have not. The variables that were found to be significant were further explored to determine their interrelationships.

This chapter also looked at the compassion fatigue self test and the TSI-BLS as measures of trauma workers secondary traumatic stress, as well as if there was a difference between trauma workers qualification and secondary traumatic stress.

The following is a brief summary of findings:

- Hypothesis One: No significant associations were identified between level of exposure (caseload) and vicarious traumatisation and between level of exposure (caseload) and compassion fatigue.

- Hypothesis Two: There was a significant difference between vicarious traumatisation and previous exposure to non-work related trauma. There was a significant difference between compassion fatigue and previous exposure to non-work related trauma.
- Hypothesis Three: Empathy was significantly positively correlated with vicarious traumatisation and compassion fatigue.
- Hypothesis Four: Social support was significantly negatively correlated with vicarious traumatisation and compassion fatigue.
- Hypothesis Five:
 - Empathy was found to moderate the relationship between previous exposure to non-work related trauma and compassion fatigue. Empathy was found to moderate the relationship between previous exposure to non-work related trauma and vicarious traumatisation.
 - Social support was not found to have a moderating effect with previous exposure to non-work related trauma and compassion fatigue. As well as it was not found to have a moderating effect with previous exposure to non-work related trauma and vicarious traumatisation.
- Hypothesis Six: There was a positive significant relationship between compassion fatigue scores and TSI-BLS scores.
- Hypothesis Seven- No significant difference was identified between vicarious traumatisation and qualification, and compassion fatigue and qualification.

Findings from these statistical analyses will be discussed with reference to theory in the following chapter.

CHAPTER SEVEN

DISCUSSION

7.1. INTRODUCTION

The research has focused on the effects of being a trauma worker and dealing with criminal violence in South Africa. It was suggested that due to the nature of violence in South Africa trauma workers are an important resource in dealing with its aftermath. However this puts themselves at risk of developing secondary side effects. According to the literature, important variables which influence this risk are empathy, social support and level of exposure to the traumatic material. This chapter will discuss the results of this study in relation to the literature presented in the previous chapters. These results were derived from the research questions and the scales administered to measure the chosen variables.

The aim of the study was to determine the relationship between secondary traumatic stress and level of exposure to traumatic material, secondary traumatic stress and empathy, and secondary traumatic stress and level of perceived social support in a sample of trauma workers who work with victims of violent crime. This study also explored the interrelationships between these variables. As a secondary aim this study attempted to provide a clearer conceptualisation of the terms vicarious traumatisation and compassion fatigue and their relation to Secondary Traumatic Stress. It also looked at whether there was a significant difference between professional and non-professional trauma workers.

This chapter first discusses the results of the analysis in the same order as presented in the previous chapter. The chapter then proceeds to discuss the limitations of this research and the theoretical and practical implications. Lastly, it provides a conclusion for the study.

7.2. INTERNAL CONSISTENCIES

According to Rosenthal and Rosnow (1991) 0.60 is an adequate level of reliability (Rosenthal & Rosnow, 1991). Therefore the reliability for all the scales and subscales were shown to be of a good level (ranged from 0.84 to 0.89). A high reliability implies that the items in this instrument measure the same attribute (Welman &

Kruger, 2001). The reliability of the scale indicates the usefulness of the Level of Exposure Checklist, Compassion Fatigue Scale, TSI-BLS, CSQ and IRI as instruments for measuring exposure, secondary traumatic stress, social support and empathy, respectively.

These findings are consistent with previous studies that have shown these scales to have good internal reliabilities overall and for each of the subscales (Atkins & Steitz, 1998; Dutton *et al*, 1994; Stamm & Figley, 1996). Thus, all the measures used in this study seem to be valid and appropriate for measures of trauma work, displaying good internal consistencies.

7.3. DESCRIPTIVE STATISTICS

Descriptive statistics were included in the methodology chapter and results chapter as they were considered beneficial to the study in that they provide a context within which the results can be interpreted and provide a greater familiarity to the study. Descriptive statistics are used for classifying, summarizing and describing quantitative data (Mendelsohn, 2002). They were used in the current study mainly to show the levels of secondary symptomology presented in the study, to give an idea of the extent of violent crimes dealt with and sources of social support perceived as having a positive and negative impact.

7.3.1. Levels of Secondary Traumatic Stress Outcomes

Consistent with secondary traumatic stress theory that states that being exposed to another's traumatic material has the potential to produce traumatic stress in the helper (Figley, 1995; 2003; Dutton & Rubenstein, 1995; Pearlman & Saakvitne, 1995; Salston & Figley, 2003; Steed & Bicknell, 2001), in the current study it was found that trauma workers who work with victims of violent crimes do experience negative reactions. The results from conducting simple statistics showed that 28% of the participants were at risk of developing secondary traumatisation according to the compassion fatigue self-test. With regards to the TSI-BLS, 30% of the participants were at risk of developing vicarious traumatisation. This is not surprising as previous South African studies such as Durrant (1999) and Wilson (1998) showed similar results. Furthermore due to the nature of crime that the trauma workers had to deal with, one would expect levels of secondary traumatic stress to be presented in this

sample. These findings are also consistent with Figley's (1995) comments on the theory of secondary traumatic stress. Figley (1995) maintains that individuals such as trauma workers are particularly at risk for this type of stress, as they work in direct contact and on an ongoing basis with very traumatic material (Figley, 1995).

Despite the sample displaying symptoms of secondary traumatic stress, the levels experienced were not as high as South African studies conducted on direct victims (MacRitchie, 2004; Mendelsohn, 1997). This provides evidence for the argument regarding the primacy of the nature of the traumatic stressor in the development of PTS symptomology. It is argued that the lesser immediacy of the stressor to the self, the less intense the effects are likely to be (Green, 1990). Another reason for the low levels of secondary traumatic stress reported reflects current literature which states that violent crime is becoming the norm in South Africa. Therefore it may be said that people are becoming resistant to the shocking nature of violent crimes, and therefore they are having less of an impact (Schönteich & Louw, 2001). It is possible that the participants have come to believe that being a victim of crime is part of everyday life and have heard so many stories of violent crime that they have adapted to it and accepted it. Another possibility for these findings is that direct exposure to trauma (ie. PTS symptomatology) in the sample was being measured as opposed to secondary traumatisation.

7.3.2. Types of Violent Crime

In this study, although the severity of the different types of violent crimes that the trauma workers have dealt with were not explored, an interesting finding was the different frequencies of each occurring crime in South Africa. It was felt that these findings were worthy of further elaboration.

The majority of trauma workers in the sample counselled mostly victims of robberies (71%), hijackings (70%), burglaries (69%), common assault (41%), and rape (39%). The relatively high level of these forms of violent crimes seem to provide support for the SAPS (2004) crime statistics, which indicate that these types of violent crimes are the highest reported in South Africa (CIAC, 2004). In addition, the high amount of crimes that most trauma workers had dealt with over a three month period reflect the high incidence of criminal violence in South Africa at present (CIAC, 2004) thus

supports those who consider South Africa as having a "culture of violence" (Harris, 2002; Schönreich & Louw, 2001) and international statistics which show South Africa to be one of the most violent countries in the world (WHO, 2002).

Due to the relatively high levels of crime in South Africa (CIAC, 2004; Harris, 2002; Schönreich & Louw, 2001) and the reasoning that an individual does not exist in a vacuum; he/she may have a trauma history of his/her own (Munroe *et al*, 1995). In the current study 50% of the trauma workers had previously been a victim of non-work related trauma, and 50% had not. Literature argues that having been a victim themselves can be an advantage in understanding their clients and being able to model healing. However if this traumatic incident went unacknowledged or unresolved it appears that secondary traumatic stress may be intensified as they are already suffering from PTS symptomology (Munroe *et al*, 1995). This raises questions as to whether it would be more appropriate to measure for PTSD or secondary traumatic stress or both in this sample.

7.3.3. Sources of Social Support

In order to contextualise the discussion around social support, it may be beneficial to briefly discuss the sources of perceived social support which the participants identified. Chisolm (1990) suggested that the perception of emotional support is of great importance to the psychological health of the individual. It has also been more related to psychological health than actual support (Carson, Butcher & Mineka, 1998).

The crisis support questionnaire asked questions such as "who is helpful?", "Who is willing to listen?", and "Who makes you feel worse?" which required participants to indicate their perceived sources of positive/negative social support.. With regards to positive support family members (eg. mother, cousin, sister, uncle) (n=53), friends (n=56) and significant other (eg. spouse, fiancé, boyfriend) (n=38) were indicated the most. From these trends it becomes apparent that trauma workers view their sources of social support mainly from their home environments, followed by the workplace. With regards to negative support received, participants indicated family members (42%) and friends (37%) as potential sources.

Although these findings were not explored further in this study nor were they particularly pertinent to the study, they provided a description of what types of support networks are available to trauma workers. The sources of support identified are consistent with studies such as Blumberg (2000) who looked at the relationship between locus of control and the impact of traumatic events in a sample of 279 South African university students. Blumberg (2000) found that families and friends are often sources of positive support, however they can also be seen as negative support as they may encourage those suffering from secondary traumatic stress to pull themselves together and discourage discussion around the trauma, this in turn causes the individual to become withdrawn from their social support networks. Blumberg (2000) also notes that although an individual may have a good social support network they may not make use of these support networks which increase their likelihood of developing secondary traumatic stress (Blumberg, 2000). Similarly findings with regards to positive and negative social support were found in other South African studies (Marinus, 1997; Ortlepp & Friedman, 2001; Wilson, 1999).

7.4. PRIMARY HYPOTHESES

7.4.1. Hypothesis One: Increased levels of exposure to traumatic material is associated with increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers.

According to Steed & Bicknell (2001) the primary factor influencing an individual's level of exposure to traumatic material is the extent of their caseload. They argue that higher caseloads increase exposure to traumatic material (Steed & Bicknell, 2001). This is supported by Schauben and Frazier's (1995) qualitative and quantitative investigation of secondary traumatic stress in 148 female therapists working with victims of sexual violence. They found that higher client caseloads correlated with more disrupted beliefs, more symptoms of PTSD and more self-reported vicarious traumatisation (Steed & Bicknell, 2001).

In contrast, the correlations analysis conducted in this study between level of exposure to traumatic material (caseload) and secondary traumatic stress, showed that there was insufficient evidence to conclude that there was a relationship between the

trauma workers caseload and secondary traumatic stress (TSI-BLS: $r= 0.08$ and compassion fatigue: $r= - 0.07$) at a 5% level of significance. This is consistent with studies such as Follette, Polusny, and Milbeck (1994) who examined predictors of PTS symptomatology in professionals exposed to traumatic stress. They found that the percentage of caseload was not significant in predicting secondary traumatic stress (Steed & Bicknell, 2001). Furthermore Kassam-Adams (1995) study on psychotherapists working with sexual assault victims found that there was no significant relationship between workload and symptoms reported (Cornille & Woodard Meyers, 1999).

The findings of the current study suggest that almost regardless of one's overall exposure to traumatic material (ie. caseload), there is a common experience of being at risk of secondary traumatic stress. Thus it seems that ones caseload does not increase or decrease the risk of secondary traumatic stress. There are several possible reasons for the lack of statistically significant findings.

Firstly, these findings may be related to the self-report nature of the scales used. Secondly the findings may be a result of the instruments used to measure these variables being too sensitive. Another possible reason for this finding is that it is not the amount of cases which are important but the severity of the case and the intensity involved. This reason is consistent with recent literature that argues that there are several limitations to equating caseload with level of exposure such as neglecting the importance of the severity of crime dealt with, and the length and detail to which the trauma worker was exposed (Cornille & Woodard Meyers, 1999; Durrant, 1999; Steed & Bicknell, 2001). Crimes that are perceived to be most severe are rape, torture, life threat, abusive violence and grotesque death (Benatar, 1996). For example in a South African study, Durrant (1999) studied whether students ($n=100$) allied with medical sciences are at risk of developing symptoms of compassion fatigue. She found that exposure to the more traumatised patient contributed to the risk of developing compassion fatigue more than the number of patients they had dealt with (Durrant, 1999).

As caseload was found to be non-significant it will not be included in the examination of the interrelationship.

7.4.2. Hypothesis Two: Direct exposure to violent crimes increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers

An individual does not exist in a vacuum. He/she may have a trauma history of his/her own (Munroe *et al*, 1995). Previous non-work related trauma is often equated with level of exposure and is an important element of secondary traumatic stress (Rudolph *et al*, 1997; Solomon, 1993). In this sample it was found that 50% of the participants had been a previous victim of non-work related violent crime. The type of crime that they had been exposed to was not investigated as it was not seen to be important to the present study.

While in the past it was often thought that previous exposure to trauma, increased a persons ability to cope with trauma, recent trauma studies have shown that re-traumatisation seems to intensify and increase trauma symptoms (Solomon, 1993). The results of a two-sample t-test between level of exposure (previous trauma-yes/no) and secondary traumatic stress showed that previous traumatisation has a statistically significant impact on the development of secondary traumatic stress (TSI-BLS: $t(62) = 1.92$ and compassion fatigue: $t(62) = 3.97$) at a 5% level of significance. Results also showed that those who had been a previous victim of crime scored higher on the secondary traumatic stress scales than those who had not been a previous victim.

These findings are consistent with literature and studies that have suggested that if the previous trauma had gone unacknowledged or unresolved it may have intensified and increased symptoms of secondary trauma (Munroe *et al*, 1995; Solomon, 1993). This supports Cornille and Woodard Meyers (1999) study which showed a relationship between personal history to trauma and poor psychological health in psychotherapists (Cornille & Woodard Meyers, 1999).

As caseload was found to be non-significant, but previous exposure to non-work related trauma was found to be significant it raises questions as to whether it was secondary traumatic stress or PTSD that was actually being measured.

7.4.3. Hypothesis Three: Increased levels of empathy as measured by The Interpersonal Reactivity Index is associated with increased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale in trauma workers

The literature review argued that trauma workers use empathy as a major resource for effectively counselling people and entering their world. It is also associated with many positive qualities that influence an individual to become a counsellor, therefore its logical to assume that those who become trauma workers should be empathetic (Adams *et al*, 2004; Wildeman, 2000). Figley (1995) supports this idea and argues that empathy is an innate characteristic in people who choose to do trauma work (Figley, 1995).

However literature also argues that empathy is a paradox- despite it being an excellent resource for trauma workers, it may be a major key factor in the transmission of traumatic material from the primary to secondary victim, and thus makes one susceptible to developing secondary traumatic stress (Figley, 1995; 2003). Results obtained from a correlational analysis between level of empathy and secondary traumatic stress showed that a moderate positive relationship exists between empathy and compassion fatigue ($r=0.40484$, $p< 0.05$) and between empathy and vicarious traumatisation ($r= 0.32990$; $p<0.05$). In other words it is proposed that the higher the individuals' level of empathy, the more susceptible they are at developing secondary traumatic stress.

This is in support of the only other empirical study that was found that discussed empathy and trauma. In a study conducted by Regehr, Goldberg and Hughes' (2002) the relationship between empathy and trauma in ambulance paramedics is explored. They found that paramedics with higher ability to empathise with patients were more susceptible to secondary traumatic stress symptoms (Regehr *et al*, 2002).

7.4.4. Hypothesis Four: Increased levels of perceived social support as measured by the Crisis Support Questionnaire is associated with decreased levels of Secondary Traumatic Stress as measured by The Compassion Fatigue Test and the TSI Belief Scale in non-professional trauma workers

Literature on secondary traumatic stress highlights social support as having an impact on negative effects. As anticipated, more supportive environments appear to be associated with better outcomes (Flannery, 1998). However there is still a lack of clarity into the precise manner in which social support relieves stress as few studies have focused on the relationship between social support and secondary trauma (Esprey, 1996; Wilson, 1998).

Hypothesis four explores the role of social support as a main effect. Social support as a main effect is important for directly promoting health and health behaviours and thereby protecting the trauma worker from negative outcomes. In this view social support is beneficial regardless of whether or not the trauma worker is under stress (Durrant, 1999).

Results obtained from the correlational analysis between level of social support and secondary traumatic stress showed there to be a significant negative relationship between perceived social support and vicarious traumatisation ($r=-0.36193$, $p<0.05$) and perceived social support and compassion fatigue ($r=-0.28465$, $p<0.05$). This correlation indicates that there is an inverse relationship between social support and secondary traumatic stress. In other words it is proposed that the higher the participants perceive their level of social support, the lower the degrees of risk for secondary traumatic stress and vice versa. This is consistent with two other South African studies. Durrant's (1999) study on compassion fatigue in the medical sciences, found that perceived social support was significantly inversely related to compassion fatigue. In other words strong perceived social support indicated lower degrees of risk for compassion fatigue (Durrant, 1999).

Ortlepp (1998) conducted a study that looked at non-professional trauma debriefers in the workplace. She found that social support was a main effect variable when considering the relationship between participants perceived support and secondary traumatic stress. In other words she found that participants who indicated high levels of perceived social support displayed fewer symptoms of secondary traumatic stress (Ortlepp, 1998). From these studies it is clear that social support exhibits a main effect.

7.4.5. Hypothesis Five: The trauma workers level of empathy and level of social support act as moderators between level of exposure to traumatic material as measured by Exposure checklist and secondary traumatic stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale

Secondary trauma is a result of a complex interrelationship of numerous factors. All which are relevant and important to investigate when trying to account for an individual's degree of risk for secondary traumatic stress. In this study empathy and social support were proposed as possible moderators in the relationship between level of exposure and secondary traumatic stress.

As results showed caseload as a form of exposure to traumatic material to be non-significant, it was not computed in the moderated multiple regression. However previous exposure to non-work related trauma was significant and therefore used as a measure for the level of exposure to traumatic material.

7.4.5.1. Empathy

Researchers in the field of trauma repeatedly allude to the role of individual characteristics (especially empathy) in an individual's reaction to exposure to traumatic material. Figley (1995) argued that "those who have enormous capacity for feeling and expressing empathy tend to be more at risk of compassion stress" (Figley, 1995, p.1). Although the theoretical conceptualisation on the role of empathy in the development of secondary traumatic stresses seems to be logical, as far as the researcher is aware, there have been no empirical studies to support this idea or to pinpoint the exact role of empathy. Thus this study investigated empathy as a potential moderating variable in the secondary traumatic stress process.

A moderated multiple regression was computed in order to explore the interrelationship between level of exposure (independent variable), level of empathy (moderator) and level of secondary traumatic stress (dependent variable). Results showed empathy to have a moderating effect on this interrelationship. With regards to compassion fatigue which focuses on an individual's symptomatology, empathy emerged as a consistent moderator ($t(60) = -2.65$; $p < 0.05$) of the relationship

between level of exposure and secondary traumatic stress. Findings indicated that empathy makes no difference in developing compassion fatigue unless the trauma worker has been a previous victim of violent crime. In being a previous victim of non-work related trauma it appeared that it made the trauma worker more empathetic towards their clients, however as a result of this increased level of empathy it may have also increased the trauma workers level of compassion fatigue. Those who had not been a victim of previous trauma showed lower levels of empathy and low to medium levels of compassion fatigue. Results showed that empathy and direct exposure have a combined effect on the development of compassion fatigue and account for a combined percentage (45%) of the variance in relation to secondary traumatic stress.

Similarly, the TSI-BLS scores showed related results. The TSI-BLS is a measure of vicarious traumatisation, and therefore focuses on cognitive aspects of secondary traumatisation rather than symptoms. Results from the moderated multiple regression showed statistically significant results for the TSI-BLS ($t(60) = -1.47; p < 0.05$) as a moderator of the relationship between level of exposure and secondary traumatic stress. It was also found that being a previous victim of non-work related trauma may make the trauma worker more empathetic towards their clients, but may also increase the level of vicarious traumatisation experienced. Similarly those who had not been a victim of previous trauma showed low levels of empathy and low to medium levels of vicarious traumatisation. Results showed that empathy and direct exposure have a combined effect on the development of vicarious traumatisation and account for a combined percentage (20%) of the variance in relation to secondary traumatic stress.

Despite the similar findings with the compassion fatigue scale and the TSI-BLS, the TSI-BLS findings were not as significant as those for the compassion fatigue scale. Although compassion fatigue appears to lead to a stronger relationship, this might be a result of TSI-BLS being a more subtle measure, and the fact that it doesn't measure symptoms as such. Therefore it may be that higher scores on the compassion fatigue scale may actually indicate that those trauma workers had PTS symptomology related more to their direct exposure to non-work related trauma rather than their work as a trauma counsellor, which in turn impacts on their role as a trauma worker and the impact this work has on them.

As previously mentioned because caseload was found to be insignificant, but previous exposure to non-work related trauma was found to be significant it was questionable as to whether it was secondary traumatic stress or PTSD that was actually being measured. However the fact that empathy is also correlated suggests that there is something in the nature of the work people are doing in relation to their personal experience of violence that is related to the manifestation of secondary traumatic stress.

7.4.5.2. Social support

Literature identifies social support as a key variable in determining an individual's response to exposure to traumatic material (Beaton & Murphy, 1995; Dutton & Rubenstein, 1995; Flannery, 1998, Kleber & Brom, 1992). Despite this claim there is still confusion to the precise nature and role of social support. A debate in literature regarding the role of social support is whether social support should be regarded as a moderator or an independent variable in its own right that exerts main effects on the dependent variable under research (Ortlepp, 1998).

This study aimed at determining whether or not social support had a moderating (buffering) effect. Flannery (1998) suggested that a high level of social support moderates the adverse psychological effects which the experience of a trauma can have on a person (Flannery, 1998). A moderated multiple regression was computed in order to explore the interrelationship between level of exposure (independent variable), level of social support (moderator) and level of secondary traumatic stress (dependent variable).

Results of the moderated multiple regression showed that there was no significant interaction between level of social support and previous exposure to violent crime at a 5 % level of significance. This indicates that social support did not moderate the relationship between exposure to traumatic material and development of secondary traumatic stress. In elaborating this finding it shows us that one's level of social support has no statistically significant effect on the strength of relationship between exposure to traumatic material and development of secondary traumatic stress. This is surprising since it would seem reasonable to expect that if one receives low support or

has poor support networks one would have a harder time with dealing with stress and therefore develop secondary traumatic stress. However this finding is supported by two South African studies (Esprey, 1996; Ortlepp & Friedman, 2001).

Esprey (1996) investigated PTS response of South African township residents who were victims of continuous criminal violence. Results showed that perceived social support was not found to moderate this relationship (Esprey, 1996). In addition Ortlepp (1998) conducted a study that looked at non-professional trauma debriefers in the workplace. She found that social support did not emerge as a consistent moderator in the relationship between trauma debriefers' experiences and the indicators of secondary traumatic stress (Ortlepp, 1998).

In summary, results obtained in this study point to social support as being a variable exerting main effects on the indicators of secondary traumatic stress. It has a direct impact on secondary traumatic stress but does not influence whether prior direct exposure is associated with secondary traumatic stress.

With this said, despite social support being non-significant it may in fact still play a moderating role. There are a few possible reasons as to why social support was shown to be non-significant. Firstly, it may be a result of multicollinearity, which occurs when the independent variable and moderators are correlated with each other, as was the case. In the presence of multicollinearity the meaning of the hypothesis tests and size and direction of the parameter estimates can change. Therefore often significant variables can become non-significant (Rosenthal & Rosnow, 1991). In doing a stepwise regression to account for multicollinearity, a score of 14.67 on the condition index was obtained. This suggests that significance may have been affected, and that in fact social support may be a significant moderator of the relationship between level of exposure and secondary traumatic stress.

Another reason for the lack of moderation may be due to the particular sample chosen for this investigation, and therefore this study may have benefited from a larger sample. Lastly, it might be that the measure (ie. CSQ) used for this study may have had limited applicability and it may not have been able to measure social support adequately.

7.5. SECONDARY HYPOTHESES

7.5.1. Hypothesis Six: There is a relationship between compassion fatigue as measured by The Compassion Fatigue Self-Test and vicarious traumatisation as measured by the Traumatic Stress Institute Belief Scale.

As discussed in the literature, confusion arises with the relationship between vicarious traumatisation and compassion fatigue as specialists in the field of trauma often use these terms interchangeably with reference to their studies and theories (Figley, 1995). In addition there are those who argue that compassion fatigue, vicarious traumatisation and secondary traumatic stress are distinct terms that differ in their emphasis, context and focus (Steed & Bicknell, 2001), however they both point to the impact of trauma work on counsellors. This study therefore compared both scales as a validation for secondary traumatic stress.

In order to ascertain whether both scales measured similar aspects of secondary traumatic stress, Pearson's product-moment correlation coefficient was conducted. The correlational coefficient was found to be 0.64 at a level of 5% significance indicating a relatively strong correlation between the scales. The fact that the Compassion Fatigue and the TSI-BLS were found to be significantly positively correlated with one another was not surprising as both scales are concerned with secondary traumatic stress in trauma workers. This finding, however, helps validate vicarious traumatisation and compassion fatigue as measures of secondary traumatic stress.

As only a moderate relationship was indicated this shows that although they are both related they measure different aspects of trauma. In other words the compassion fatigue scale appears to measure mostly symptoms of secondary traumatic stress and therefore can be used as a measure for compassion fatigue, and the TSI-BLS appears to measure cognitive aspects of secondary traumatisation, and thus can be used as a measure of vicarious traumatisation. This supports literature which discusses both concepts as separate concepts of secondary traumatic stress but overlapping (McCann & Pearlman, 1990; Ortlepp, 1998; Stamm, 1997).

7.5.2. Hypothesis Seven: There is a difference between professional and non-professional trauma workers and their level of secondary traumatic stress as measured by The Compassion Fatigue Self-Test and the Traumatic Stress Institute Belief Scale.

As research findings reflect contradicting views as to whether ones level of qualification makes one vulnerable to secondary traumatic stress (Munroe *et al*, 1995; Steed & Bicknell, 200; Wilson, 1998) this study looked at the difference between professional and non-professional trauma workers. Past research studies have found conflicting results with regards to qualification. It has been found that those counsellors who were more qualified were at lower risk of experiencing compassion fatigue (Dutton & Rubenstein, 1995; Figley, 1995; Steed & Bicknell, 2001). However, other studies have shown that working in the field of trauma on a full-time basis may make them more susceptible in developing secondary traumatic stress (Munroe *et al*, 1995, Ortlepp, 1998).

Results from the two independent sample t-test revealed that there was no significant difference between qualification and levels of vicarious traumatisation ($t(62) = -1.58$; $p > 0.05$) and levels of compassion fatigue ($t(62) = -0.43$; $p > 0.05$). A possible reason for the current findings is that the overall the violent nature of South African society impacts similarly on all trauma workers, regardless of ones training. Furthermore other factors such as level of social support, severity of exposure and the nature of the violent crime may have more of an impact. These scales fail to include these important elements.

However, results of this analysis are supported by Munroe's (1991) study that showed that the development of secondary traumatic stress is not related to level of experience or qualification of the trauma worker (Munroe *et al*, 1995). And in Wilson's (1998) study which looked at secondary traumatic stress in trauma counsellors (both professional and non-professional) in South Africa. Results of this study showed that both groups suffered from similar levels of compassion fatigue (Wilson, 1998).

7.6. CONCLUDING COMMENTS

The present study challenged the convenience of conceptualising secondary traumatic stress in a simple manner, which lacks deeper understanding. It proposed that the

process of secondary traumatic stress is far more complex and involves an interaction between certain variables. **Figure 7** represents all the results of the present study (a= Compassion fatigue Self Test; b= TSI-BLS).

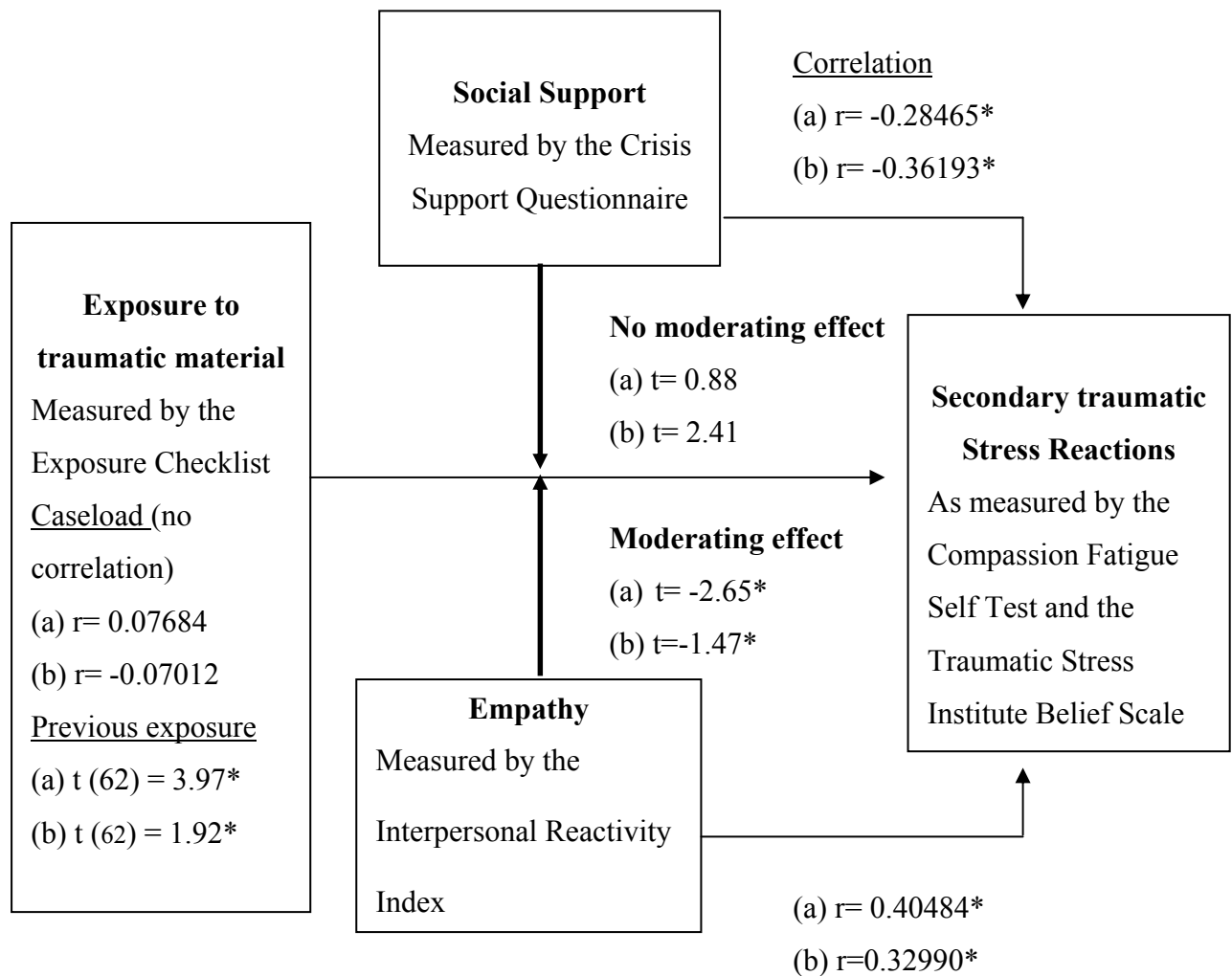


Figure 7: Representation of the results relating to hypotheses explored in the current study

The refined model for trauma workers in South Africa proposed that variables such as level of exposure to traumatic material, level of empathy, and level of social support would differentiate the level of secondary traumatic stress experienced by trauma workers. It also proposed that there would be an interrelationship between these variables.

Results of this study have provided several important contributions to the field of secondary trauma. The main findings of this study are as follows:

Level of Exposure to Traumatic Material

The issue of exposure to traumatic material has become central to discussions of secondary traumatic stress (Steed & Bicknell, 2001). However there are debates as to what constitutes as exposure. This study therefore looked at two possible types of exposure- caseload and previous exposure to non-work related trauma. Results showed that the trauma workers caseload was not statistically significant in predicting secondary traumatic stress. Thus it seems that ones caseload does not increase or decrease the risk of secondary traumatic stress. However trauma workers level of previous exposure to non-work related trauma was found to be statistically significant. It was found that exposure to previous non-work related trauma may place the trauma worker more at risk to secondary traumatic stress.

Personal Characteristics

The literature discussed empathy as an important personality characteristic in the development of secondary traumatic stress, however there appeared to be no studies with regards to its role in trauma workers experiences. In this study empathy was shown to have a statistically significant impact on the development of secondary traumatic stress. Results showed that high levels of empathy may increase the risk of secondary traumatic stress. Empathy was also found to serve a moderational role in the relationship between previous exposure to non-work related trauma and secondary traumatic stress. This interaction proposes that trauma workers who have been previous victims of crime are more likely to have high levels of empathy and are thus more likely to develop secondary traumatic stress.

Environmental factors

The literature review highlighted social support as having a significant effect in decreasing secondary traumatic stress. However, it lacked position in the way which social support has been conceptualised in empirical studies. In this study social support was found to exert a main effect on secondary traumatic stress. Findings suggested that higher levels of social support may the lower the risk for secondary traumatic stress. Findings also showed that social support did not moderate the relationship between previous exposure to non-work related trauma and development

of secondary traumatic stress. Therefore there was insufficient evidence to support the role of social support as a buffer.

Outcomes (ie. Secondary Traumatic Stress)

When working with victims of violent crimes trauma workers often experience strong reactions to hearing violent and vivid narratives (Salston & Figley, 2003). This may lead to secondary traumatic stress. Two types of secondary traumatic stress were explored in this study- compassion fatigue and vicarious traumatization- as both measure different aspects of secondary traumatic stress and both are a result of working with victims of trauma. In the present study 28% of the participants were at risk of compassion fatigue and 30% of the participants were at risk for vicarious traumatization.

7.7. LIMITATIONS OF THE STUDY

Although great attention was paid to the content, literature, methodology and statistical analyses of this study a number of limitations may be identified. One limitation focuses on the model which is at the centre of this study, however the major limitations of this study relates to methodological issues. These can be classified in the following categories: research design, sample, data collection, instruments, and data analysis.

7.7.1. LIMITATIONS OF THE REFINED MODEL FOR TRAUMA WORKERS

The refined model for trauma workers who work with victims of violent crime proposed that there are numerous factors that can moderate responses to secondary trauma, both with regards to personal characteristics and environmental factors. However in this study only empathy and social support were explored, thereby limiting the exploration of other factors which may have affected the outcome. This may have underplayed the role of environmental and personal characteristics.

In defence of this criticism no study can be exhaustive in terms of examining all the relevant characteristics and therefore the current study focused on those perceived as more important in the development of secondary traumatic stress.

Another criticism is that this model is somewhat limiting in its focus as it only looks at the negative aspects of being a trauma worker, while failing to explore the positive outcomes which may also arise. There are many positive outcomes of being a trauma worker. These include role satisfaction, heightened sensitivity to other vulnerabilities and continued dedication to comply with the responsibilities inherent in the work of trauma workers. This provides a limiting view of the trauma worker and the nature of their work. Due to these limitations future research may want to revise and expand on the above model.

7.7.2. RESEARCH DESIGN

The research design is ex post facto as questionnaires were collected after the event occurred. Although this type of design has many advantages such as it is good for testing and refining theory, and it ensures realism and relevance (Rosenthal & Rosnow, 1991), it also poses several disadvantages.

Firstly, ex post facto is correlational, as the independent variables cannot be manipulated, nor can there be random assignment. Correlational studies provide weak support for causal hypotheses and thus causal conclusions cannot be drawn (Rosenthal & Rosnow, 1991). Therefore, although the findings that emerged from the study contribute to the field of trauma, causality cannot be inferred. To overcome this limitation future research should employ a longitudinal study so to monitor the effects of trauma work over time. Longitudinal studies of responses to trauma would produce a deeper level of understanding of the course of secondary traumatic stress. Despite this disadvantage, the choice of using a cross-sectional design for this study was based upon practical considerations such as time constraints, economical limitations, difficulty in following up with such a large sample and the willingness of volunteers.

Secondly, although ex post facto design is advantageous as it entails that the participants make up both the experimental and control group, making the research more 'natural'. It can be a disadvantage as it minimises the amount of control the researcher has over third variables. There are many potential threats to internal validity (the degree to which conclusions can be supported by the design and procedures of the study) may influence the results of the study (Rosenthal & Rosnow, 1991). The researcher therefore needs to be aware of these threats and guard against

them, otherwise these threats may lead to third variable problems and problems due to causal arrow ambiguity (Welman & Kruger, 2001).

Lastly, conducting research within a quantitative paradigm makes it difficult to do justice to the broad social and political context of traumatic stress in South Africa. Therefore using a multi-method approach may have been more beneficial as it also could have included qualitative measures which provide more in-depth data material.

7.7.3. SAMPLE

The present study incorporated both professional and non-professional trauma workers so to fill in the gap in trauma literature. While this contributes to the uniqueness of the study, the nature of this sample may introduce certain limitations.

The sample was selected on the basis of convenience and consisted of trauma workers who volunteered to participate in the study. The disadvantages of using volunteer samples have been well documented in the literature. Volunteer bias is the systematic error resulting when participants who volunteer respond differently from how those in the general population would have responded. The main concern is the similarity between those who volunteered to participate and the target population. There are specific reasons as to why some people agree to participate while others decline. Therefore it is possible that volunteering to participate in the study was somehow linked to certain variables (eg. more empathetic individuals), this may influence the results of the study (Rosenthal & Rosnow, 1991).

Non-probability sampling was employed as the sampling method. In non-probability sampling the probability that any person from a specific population will be selected is not known, therefore generalisability may be reduced. Its main weakness is the subjectivity involved in the sample selection. The subjective nature of the process adds uncertainty when the sample is used to represent the whole population (Welman & Kruger, 2001).

The sample primarily comprised of female, white, educated trauma workers. Thus the characteristics of the sample may limit the extent to which the findings of this research may be generalised to other trauma workers both professional and non-

professional. However future research on a different sample of trauma workers will determine the generalisability of the current study.

In obtaining the sample, several limitations occurred. For example access to certain counselling organisations was not granted, no explanation was given. Furthermore although initially most individuals approached agreed to participate in the study, the response rate was quite poor (*this is further discussed in 7.7.4.*).

A further limitation of the current study is its sample size. Although the sample size was adequate for the statistical procedures used in the current study, its size may have introduced problems with the statistical analyses. Sample size affects the power of a test, the smaller the sample the lower the power of a test. Due to this limitation caution was used in the interpretation of data. In future studies a larger sample size would be more ideal.

7.7.4. DATA COLLECTION

Questionnaires used to gather data consisted solely of self-report measures. The subjective responses of participants, although essential and relevant for this research, may also be problematic. The problem with this type of approach concerns the accuracy and honesty of responses. It is impossible to determine or control the honesty of the answers and the seriousness with which the questionnaires were completed (Gillham, 2000; Welman & Kruger, 2001). Answers received may also be reconstructions of participant's experiences, influenced by the demands of the research. Furthermore participants often tend to answer questions in what they consider to be a socially desirable manner (Rust & Golombok, 1992). In addition questionnaires were only administered in English. This may have posed a problem to second language speakers as they may have had trouble understanding certain questions and/or statements.

Questionnaires as a method of data collection is often criticised due to the lack of in-depth information in areas of concern. Data collection methods such as interviews could have been utilised to supplement and verify self-report measures (Welman & Kruger, 2001).

In general, it was found that there was lack of willingness and motivation for completing the questionnaire. This may be due to three reasons. Firstly, time constraints- participants may have work they considered to be more important to complete especially if they are volunteer workers and have other full time jobs. Secondly, the questionnaire may have had no personal relevance to the participant. Lastly, participants may have been afraid of what will happen to the data or that the study may impact them negatively.

Despite the limitations illustrated above, self-report instruments were felt to be the most viable option after other options were considered (eg. interviews) and debated. One of the main reasons was that it could be administered to a relatively large, demographically diverse sample and it is considered to be less invasive which has been shown to encourage participant's disclosure (Gillham, 2000).

7.7.5. INSTRUMENTS

The amount of instruments that made up the questionnaire was essential as each variable needed to be measured in order to ensure the feasibility of the study. However despite this necessity it also made the study lengthy which in turn may have led to boredom and tiredness and may have contributed to the low response rate.

The questionnaire comprised of likert type scales. This method often introduces central tendency bias, which is the tendency of individuals to select the middle response of the rating scale, rather than using the extremes. However this method was used as it is widely used format and it appears that with this method participants are more likely to feel greater freedom of expression and they generally find them more enjoyable than other formats (Gillham, 2000).

Another limitation is that the concepts looked at in the current research (ie. social support, empathy, secondary traumatic stress, level of exposure) are so complex that a single approach cannot really encompass its complexity. In reducing the narrative into a quantifiable number, the complexity of a response to a life experience is lost (Durrant, 1999).

With concern to the actual measures used, a limitation which was found using the level of exposure checklist was that it did not give an indication of the severity of the types of crimes in which the trauma worker dealt with, nor did indicate the trauma workers subjective perception of the event in any way. Future studies may want to include a rating scale to incorporate these important aspects.

In the field of secondary traumatic stress two of the most widely used instruments are the Compassion Fatigue Scale and the Traumatic Stress Institute Belief Scale. Stamm (1995) emphasises that the compassion fatigue scale was not designed as a diagnostic tool, but was intended as an educational tool and early warning device and, as such, tends to error on the side of over inclusion. Although it is possible that the Compassion Fatigue Scale may have over-estimated the presence of secondary traumatic stress in this sample, it still suggests that approximately half the trauma workers sampled need to consider the impact their work is having on them and take preventative measures to address the current symptoms of secondary traumatic stress. This scale also does not consider the positive aspects of trauma work, such as sense of satisfaction derived from this type of work. To disregard this aspect generates a biased view of trauma work.

Furthermore the compassion fatigue test and the TSI-BLS have been developed to investigate secondary traumatic stress in full-time trauma work, thus the appropriateness for using these scales on non-professional trauma workers may be seen as a limitation. However it's important to note that past studies have used both these scales successfully on this type of population.

The CSQ was found by the participants to be quite repetitive in naming the sources of perceived support. And a limitation of the IRI was that it had not previously been used on a South African sample. However it has been used on trauma workers, in addition no other relevant empathy scale could be found. Several participants also found it somewhat confusing to complete.

Despite these limitations, good reliabilities of the scales obtained in this study suggested that the participants responded with some consistency and appeared to find the measures comprehensible.

7.7.6. DATA ANALYSES

The majority of the results found in the current study were derived from correlational analyses, therefore although the findings that emerged from the study contribute to the field of trauma, causality cannot be inferred (Welman & Kruger).

In addition several other areas may have been analysed and to provide richer material for the study. For example despite other demographic information being obtained (eg. gender, race, age, socioeconomic status) and scales having subscales, this information was not considered in the current study. It is suggested that in future studies these variables should be further explored to enhance the study.

Despite all these limitations, they did not overshadow the strengths of the study. The major strength of this study is that it provides research into areas which have been severely limited and neglected. Although these results may not benefit the actual subjects, the findings make a helpful contribution to the field of trauma in South Africa. In addition they help validate previous literature and studies in this area, therefore it allows for a better conceptualisation of secondary traumatic stress and its components.

7.8. RECOMMENDATIONS FOR FUTURE RESEARCH

Although the research undertaken in the present study has shed some light on some of the key areas with regards to secondary traumatic stress, it is evident that future research is needed in these and other areas in order to understand secondary traumatic stress more substantially.

It was also found that the majority of the participants preferred the questionnaires to be emailed to them. The growing use of technology today in South Africa, could possibly make the collection of data easier, less costly and time-efficient. Although this method has drawbacks such as anonymity cannot always be guaranteed, it seemed preferable to participants and therefore an advantage to the study.

It is also suggested that future research studies adopt a longitudinal design, as these types of studies may offer greater insight as they provide great richness of detail. In addition, future studies may want to introduce a multi-method approach of

assessment, this enables the researcher to obtain a fuller understanding and analysis of the gathered data (Welman & Kruger, 2001). Using both qualitative and quantitative research methods, accounts for the weaknesses of either method in isolation, therefore it improves the overall research design and ensures greater reliability and validity of the data.

Lastly, in order to confirm the data of the present study and increase generalisability of results, future studies should replicate this study. It may also be interesting to do a similar study however on a different population

7.9. CONCLUSION

In South Africa, there is no doubt that violent crimes will continue to plague the lives of many people, and thus there is great demand for both professional and non-professional trauma workers. The present study attempted to provide an enhanced conceptualisation of secondary traumatic stress and the consequences of being a trauma worker in South Africa. A refined model for trauma workers was adopted as the framework for this study in which the relationships between level of exposure and secondary traumatic stress, level of empathy and secondary traumatic stress, and level of perceived social support and secondary traumatic stress; and their interrelationships could be explored.

It was found that there were significant relationships between level of empathy and secondary traumatic stress, and level of perceived social support and secondary traumatic stress. Furthermore exposure to previous non-work related trauma was found to have a significant effect on level of secondary traumatic stress experienced. With regards to the interrelationship between these variables findings showed that only empathy emerged as a consistent moderator between exposure to previous non-work related trauma and secondary traumatic stress. Secondary aims of the study helped validate that vicarious traumatisation and compassion fatigue are related concepts and are specific to trauma workers. Furthermore results showed that there was no difference between professional and non-professional trauma workers with regards to their levels of secondary traumatic stress.

In conclusion, “helping traumatised people is gratifying” (Figley, 1995, p.253) however in order to benefit from the rewards that trauma work has to offer, trauma workers should be made aware of the negative effects this type of work may evoke so they can be prepared for them. Thus it is recommended that the occurrence of secondary traumatic stress be recognised, acknowledged, and normalised as a process upon entering this field.

This study has highlighted the relevance of research in the area of secondary traumatic stress with regards to trauma workers in the field of criminal violence. It emphasises that those “... who risk their lives and their welfare to assist others, should not be neglected” (McCammon & Allison, p.115). Specifically this study attempted to address the gaps in secondary trauma literature, and provide much needed empirical evidence on important variables (ie. exposure, social support and empathy) involved in the secondary traumatic stress process. The hope is that findings from this study will enable trauma workers to continue with their valued and important service, and remain satisfied in their contribution to society.

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APPENDIX A

Subject Information Sheet:

Hi, my name is Victoria MacRitchie and I'm a psychology Master student at the University of the Witwatersrand. As part of the requirements for my course I am required to undertake a research project. I therefore wish to invite to you participate in my study, which focuses on the effects of being a trauma worker and therefore improves knowledge in the area of secondary trauma.

Attached is a set of questionnaires which will take approximately 50 minutes of your time. In completing the questionnaire, you will be giving me your consent to participate in this study. However, you are under no obligation to participate. Furthermore you may withdraw at any stage of the study. If you do decide to participate you are assured anonymity as no identifying data is asked. Your responses will be treated with the highest confidentiality, as I will be the only one who has access to the questionnaires.

Should you require any feedback, a copy of this report will be given to this organisation upon completion of the study. If you have any questions or you feel that you require any form of counselling, please feel free to contact me and appropriate arrangements will be made.

Thank you for taking interest in my research.

Yours sincerely



V J MacRitchie

APPENDIX B**Biographical Questionnaire:**

Please complete the following (Indicate with an X where appropriate):

Gender:

MALE	FEMALE
------	--------

Age: _____

Race:

BLACK	WHITE	COLOURED
INDIAN	OTHER (please specify)	

This is used solely for statistical purposes, and is not meant to be offensive.

What counselling related qualifications do you have?

APPENDIX C

Level of Exposure to traumatic Checklist

How long have you been a trauma worker? (State years and months)

Have you been a victim of violent crime(s)?

YES	NO
-----	----

Please indicate with a cross (X) the types of violent crimes you have dealt with as a trauma worker in the **past 3 months**: If you answer yes to any of the following please indicate how often you have dealt with this type of violent crime in the **past 3 months**

Types of violent crimes	Yes/no	How often
Hijacking/Carjacking		
Common Robbery		
Robbery with aggravated circumstances		
Mugging		
Rape		
Indecent Assault		
Child Molestation		
Domestic Violence		
Assault with the intent to inflict grievous bodily harm		
Common Assault		
Attempted Murder		
Murder		
Kidnapping/abduction		
Burglary		
Other (please specify)		

APPENDIX D**COMPASSION FATIGUE SELF-TEST**

Helping others puts you in direct contact with other people's lives. As you probably have experienced, your compassion for those you help has both positive and negative aspects. Consider each of the following characteristics about you and your **current** situation. Indicate your answer with a cross (X).

	Never	Rarely	A few times	Some what often	often	Very often
1. I feel estranged from others.						
2. I force myself to avoid certain thoughts or feelings that remind me of a frightening experience.						
3. I find myself avoiding certain activities or situations because they remind me of a frightening experience.						
4. I have gaps in my memory about frightening events.						
5. I have difficulty falling or staying asleep.						
6. I have outburst of anger or irritability with little provocation						
7. I startle easily.						
8. While working with a victim, I thought about violence against the perpetrator.						
9. I have flashbacks connected to those I help.						
10. I have had first-hand experience with traumatic events in my adult life.						
11. I have had first-hand experience with traumatic events in my childhood.						
12. I think that I need to "work through" a traumatic experience in my life.						
13. I am frightened of things a person I						

helped has said to me.						
14. I experience troubling dreams similar to those I help.						
15. I have experienced intrusive thoughts of times with especially difficult people I helped.						
16. I have suddenly and involuntarily recalled a frightening experience while working with a person I helped.						
17. I am pre-occupied with more than one person I help.						
18. I am losing sleep over a person I help's traumatic experiences.						
19. I think that I might have been "infected" by the traumatic stress of those I help.						
20. I remind myself to be less concerned about the well being of those I help.						
21. I have felt trapped by my work as a helper.						
22. I have a sense of hopelessness associated with working with those I help.						
23. I have been in danger working with people I help.						

APPENDIX E:**TSI BELIEF SCALE**

This questionnaire is used to learn how individuals view themselves and others. As people differ from one another in many ways, there are no right or wrong answers.

Please answer with an x. Try to complete every item.

	Strongly disagree	Disagree	Disagree somewhat	Agree somewhat	Agree	Agree strongly
1. I generally feel safe from danger						
2. People are wonderful						
3. I can comfort myself when I'm in pain						
4. I find myself worrying a lot about my safety						
5. I don't feel like I deserve much						
6. I can usually trust my own judgement						
7. I feel empty when I am alone						
8. I have a lot of bad feelings about myself						
9. I'm reasonably comfortable about the safety of those I care about						
10. Most people destroy what they build						
11. I have a difficult time being myself around other people						
12. I enjoy my own company						
13. I don't trust my instincts						
14. I often think the worst of others						
15. I believe I can protect						

myself if my thoughts become self-destructive.						
16. You can't trust anyone						
17. I am uncomfortable when somebody else is leading the group						
18. I feel good about myself most days						
19. Sometimes I think I'm more concerned about the safety of others than they are						
20. Other people are not good						
21. Sometimes when I'm with people I feel disconnected						
22. People shouldn't place too much trust in their friends						
23. Mostly, I don't feel like I'm worth much						
24. I don't have much control in relationships.						
25. I am often involved in conflicts with other people						
26. For the most part, I like other people						
27. I deserve to have good things happen to me.						
28. I usually feel safe when I'm alone						
29. If I really need them, people will come through for me						
30. I can't stand to be alone						
31. This world is filled with emotionally disturbed people.						
32. I am basically a good person						

33. For the most part; I protect myself from harm						
34. Bad things happen to me because I'm bad.						
35. Some of my happiest experiences involve other people.						
36. There are many people to whom I feel close and connected.						
37. Sometimes I'm afraid of what I might do to myself						
38. I am often involved in conflicts with other people						
39. I often feel cut off and distant from other people.						
40. I worry a lot about the safety of loved ones						
41. I don't experience much love from anyone						
42. Even when I'm with other people I feel alone						
43. There is an evil force inside me						
44. I feel uncertain about my ability to make decisions.						
45. When I'm alone I don't feel safe						
46. When I'm alone, it's like there is no one there						
47. I can depend on my friends to be there when I need them.						
48. Sometimes I feel like I can't control myself						
49. I feel out of touch with people						

50. Most people are basically good at heart.						
51. I sometimes wish that I don't have any feelings						
52. I am often afraid I will harm myself						
53. I am my own best friend						
54. I feel able to control whether I harm others						
55. I often feel helpless in my relationships with others.						
56. I don't have a lot of respect for the people closest to me.						
57. I enjoy feeling like part of my community						
58. I look forward to time I spend alone						
59. I often feel others are trying to control me						
60. I envy people who are always in control						
61. The most important people in my life are relatively safe from danger						
62. The most uncomfortable feeling for me is losing control over myself						
63. If people really knew me they wouldn't like me						
64. Most people don't keep the promises they make						
65. Strong people don't need to ask for others' help.						
66. Trusting other people is generally not very smart						
67. I fear my capacity to harm						

others						
68. I feel bad about myself when I need others' help.						
69. To feel at ease I need to be in charge						
70. I have sound judgment.						
71. People who trust too much are foolish						
72. When my loved ones aren't with me, I fear they may be in danger						
73. At times my actions pose danger to others						
74. I feel confident in my decision-making ability.						
75. I can't work effectively unless I am the leader						
76. I often doubt myself						
77. I can generally seize up my situations pretty well						
78. I generally don't believe the things people tell me						
79. Sometimes I really want to hurt someone						
80. When someone suggests I relax, I feel anxious.						

APPENDIX F:**THE CRISIS SUPPORT QUESTIONNAIRE**

The following questions ask about people in your environment who may provide you with help or support following your traumatic experiences. Firstly, please look at each question and decide if it applied to you NEVER, SOMETIMES, OFTEN or ALWAYS. Tick the box which is most applicable to you. Secondly, list the people who gave you the support, eg. Spouse, friend, colleague.

1) Whenever you want to talk, how often is there someone willing to listen?

Never	Sometimes	Often	Always

Who is willing to listen?

- | | |
|----|----|
| A) | D) |
| B) | E) |
| C) | F) |

2) Do you have personal contact with people with a similar experience?

Never	Sometimes	Often	Always

3) Are you able to talk about your thoughts and feelings?

Never	Sometimes	Often	Always

Who are you able to talk with?

- | | |
|----|----|
| A) | D) |
| B) | E) |
| C) | F) |

4) Are people sympathetic and supportive?

Never	Sometimes	Often	Always

Who is sympathetic and supportive?

- A) D)
 B) E)
 C) F)

5) Are people helpful in a practical sort of way?

Never	Sometimes	Often	Always

Who is helpful?

- A) D)
 B) E)
 C) F)

6) Do people you expect to be supportive make you feel worse at any time?

Never	Sometimes	Often	Always

Who makes you feel worse?

- A) D)
 B) E)
 C) F)

7) Overall, are you satisfied with the support you received?

Never	Sometimes	Often	Always

APPENDIX G

INTERPERSONAL REACTIVITY INDEX (IRI)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E.

Statements	Statement describes me				
	Not well				Very well
1. I often have tender, concerned feelings for people less fortunate than me.					
2. I sometimes find it difficult to see things from the "other guy's" point of view.					
3. Sometimes I don't feel very sorry for other people when they are having problems.					
4. In emergency situations, I feel apprehensive and ill-at-ease.					
5. I try to look at everybody's side of a disagreement before I make a decision.					
6. When I see someone being taken advantage of, I feel kind of protective towards them.					
7. I sometimes feel helpless when I am in the middle of a very emotional situation.					
8. I sometimes try to understand my friends better by imagining how things look from their perspective.					
9. When I see someone get hurt, I tend to remain calm.					
10. Other people's misfortunes do not usually disturb me a great deal.					
11. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.					
12. Being in a tense emotional situation scares me.					
13. When I see someone being treated unfairly, I					

sometimes don't feel very much pity for them.					
14. I am usually pretty effective in dealing with emergencies.					
15. I am often quite touched by things that I see happen.					
16. I believe that there are two sides to every question and try to look at them both.					
17. I would describe myself as a pretty soft-hearted person.					
18. I tend to lose control during emergencies.					
19. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.					
20. When I see someone who badly needs help in an emergency, I go to pieces.					
21. Before criticizing somebody, I try to imagine how I would feel if I were in their place.					

APPENDIX H:
DEFINITIONS OF CATEGORIES OF VIOLENT CRIMES

- Hijacking/Carjacking: is the crime of motor vehicle theft from a person who is present. Typically the carjacker is armed, and the driver of the car is forced out of the car at gunpoint.
- Common Robbery: is the taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force.
- Robbery with aggravated circumstances: is the taking or attempting to take anything of value from the care, custody, or control of a person or persons by violence and/or by putting the victim in fear.
- Mugging: a threatened or attempted physical attack by someone who appears to be able to cause bodily harm if not stopped. Occurs outside the home.
- Rape: the crime of sexual intercourse, without consent, and accomplished through force, threat of violence or intimidation.
- Indecent Assault: is a form of sex crime and is defined as any unwanted sexual behavior or touching which is forced upon people against their will
- Child Molestation: interactions between a child and an adult when the child is being used for sexual stimulation. It includes inappropriate physical contact, making a child view sexual acts or pornography, using a child in making pornography, or exposing an adult's genitals to a child
- Domestic Violence: any violence between current and former partners in an intimate relationship, wherever the violence occurs. The violence may include physical, sexual, emotional and financial abuse.

- Assault with the intent to inflict grievous bodily harm: is an unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury.
- Common Assault: is an unlawful attack by one person upon another.
- Attempted Murder: defined as the attempted killing of one human being by another.
- Murder: (Aka Homicide) defined as the wilful killing of one human being by another. Not included are deaths caused by negligence, suicide, or accident; justifiable homicides.
- Kidnapping/abduction: the taking of a person against his/her will (or from the control of a parent or guardian) from one place to another under circumstances in which the person so taken does not have freedom of movement, will, or decision through violence, force, threat or intimidation.
- Burglary: is the unlawful entry of a structure to commit a theft. The use of force is not required.

** These definitions are based on the South African Police descriptions for violent crimes*