

**The Effects of Secondary Trauma
on Professionals Working with Victims
and Survived Traumatized Individuals**

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Dedication

This thesis is dedicated to my parents who encouraged me to begin my journey of education in London.

I also dedicate this work to all loved ones that crossed my path and kept me motivated to continue all these years of studying. Thank you all; and I am forever grateful to you.

Finally, this work is dedicated to my very missed and beloved friend, Azra, who always told me that my determination in life will be awarded with success and happiness.

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Abstract

Research on secondary traumatisation suggests that there is a certain overlap in terminologies used in the literature that are related to the concept of secondary traumatic stress. These interchangeable concepts include vicarious trauma, compassion fatigue, burnout and counter-transference. The main aims of the current study are to investigate the differences between various terms associated with post-traumatic stress disorder (PTSD) including secondary traumatic stress, compassion fatigue and burnout. The present research also aims to investigate the impact (direct and indirect influences) of secondary trauma on professionals working with victims and survived traumatized individuals.

It was predicted that health workers who are exposed to psychological or physical traumas would experience secondary traumatic stress. In addition, it was also hypothesized that there would be gender differences in the intensity of secondary traumatic stress reactions. Longer years of employment were predicted to relate to lower levels of secondary traumatic stress. Furthermore, the profession would moderate the relationship between years of employment and secondary traumatic stress.

A sample of 210 professional staff, working in several hospitals and private clinics, and representing health and social care councils in London, United Kingdom completed four self-reported questionnaires measuring secondary traumatic stress. Several hypotheses were postulated and tested using correlation and hierarchical regression analyses. The results showed that a majority of professionals working with traumatized patients displayed symptoms related to secondary traumatic stress, in particular those professionals new to the field. However, a greater reduction in symptoms was observed the longer an individual had spent in the profession. This

finding has suggested years of experience may help professionals employ resiliency against severe traumatic events.

Other interesting findings reported in this study suggested that females are inclined to experience higher secondary traumatic stress symptoms than males, regardless of years of experience. The reported findings seem to be consistent with previously undertaken research (Figley 1995; Miller and McGowen 2000; Robinson 2003; Sonneck and Wagner 1996; Stamm 2000).

It should be emphasized here that extra care, attention and support are essential to new healthcare providers, especially during their first year of work. Researchers also need to develop intervention programmes that will assist healthcare providers in their vital work in trauma care settings – recognizing and dealing with the early stages of secondary stress symptoms and reactions is of the utmost importance.

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List of Abbreviations

A&E	Accident and Emergency
APA	American Psychological Association
BPS	British Psychological Society
BRN	Burnout
CF	Compassion Fatigue
CS	Compassion Satisfaction
DSM	Diagnostic and Statistical Manual
GHQ	General Health Questionnaire
IES	Impact of Event Scale
NHS	National Health Services
Pro-QOL	Professional Quality of Life Scale
PTG	Post-traumatic Growth
PTSD	Post-traumatic Stress Disorder
STS	Secondary Traumatic Stress
STSS	Secondary Traumatic Stress Scale
VT	Vicarious trauma

Introduction

Accident and Emergency units are overwhelmed daily with individuals of different ages who have experienced levels of trauma that are often life-threatening for the person and shocking for the family. For example, a pregnant woman giving birth two months prematurely could experience complications during delivery; the treatment of a 3-year-old child in intensive care following an extreme fall or other traumatic event can have a long-lasting effect on everyone who is directly and indirectly involved in his/her case. Bromet and Nelson (1997) stated that these occurrences are all too common because majority of the population will experience trauma within their lifetime, and some will go through several traumas (Kessler et al. 1995).

Healthcare providers delivering empathetic caring and exposed to such stressors over time can suffer from Secondary Traumatic Stress (STS), Compassion Fatigue (CF) or other secondary symptoms (intrusion, avoidance and arousal) which may lead to job dissatisfaction or burnout. Bride (2007) indicated that the number of critical care unit nurses who tested positive for Post-traumatic Stress Disorder (PTSD) symptoms related to their work environment was 24% (54/230), compared with 14% (17/121) of the general nurses ($p = 0.03$). Critical care unit nurses did not report a greater amount of stress in their life outside of the hospital than general nurses. There was no difference in symptoms of depression or anxiety between critical care unit and general nurses. The survey of critical care unit nurses also showed that 29% (41/140) of the respondents reported symptoms of PTSD, similar to the first group tested. Continuous contact and involvement with professionals in health service providers has generated considerable research interest in the field of STS or traumatisation through indirect exposure to a traumatic event (Peebles-Kleiger 2000). The objective of this research paper will be to determine whether

there is an increased prevalence of psychological symptoms among seven different healthcare professionals.

Many researchers (such as Bride 2007; Friedman, 2002; Sain-Farrell and Turpin 2003) have noted that secondary traumatic stress has been recently increasing in extent. Research in STS is now taking place beyond emergency healthcare arenas such as in nursing and/or medicine (Meadors and Lamson 2008; Sabo 2006). Sabo found that doctors who constantly take care of suffering patients are impacted by compassion fatigue. In addition, Meadors and Lamson (2008) noted that levels of personal stressors were positively associated with higher level of clinical stress among professionals working in Accident and Emergency (A&E) units. As a result investigators have begun to understand the influence of secondary trauma on medical care providers. Main manifested symptoms and reactions are very similar to those of PTSD, and may include changes in self-esteem, skills, trust, identity, intimacy and a sense of control.

The above symptoms of STS disorder have been observed in various groups of the caring professions amongst those who have close contact with individuals who have suffered traumatic events. It has been suggested (Catherall 1995) that health professionals are at an even higher risk of STS if they have a history of trauma in their own backgrounds and if they become passionately involved in the care they provide. Catherall (1995) noted that secondary traumatic stress is nearly identical to post-traumatic stress and covers a wide range of symptoms like hyper-arousal, emotional numbing, avoidance and intrusion experiences (Pratt and Pearlman 1995). The number of interventions designed to reduce the symptoms of compassion fatigue, burnout secondary traumatic stress and vicarious trauma have been growing in the past decade. Researchers in the field of traumatic studies are recognizing more and more that traumatized clients/patients are not the only individuals in need of interventions and/or assistance. Mental

health workers who are working with traumatized individuals are becoming affected and displaying negative symptoms.

As a result, attention has been given to addressing the problem of healthcare professionals who have developed a range of secondary trauma symptoms through both the development of new strategies and modification of existing techniques. Because compassion fatigue, secondary traumatic stress and vicarious trauma are recognized problems or challenges among various professionals such as social workers, psychologists, psychiatrists, accident and emergency staff, ambulance technicians and criminal justice professionals (such as lawyers, police, criminal investigators, forensics teams and others), conceptualization of the problems and the approaches used to intervene with STS symptoms are diverse. Intervention strategies targeting compassion fatigue, secondary traumatic stress, burnout and vicarious trauma range from individual level interventions to various organizational level modalities. There has been a huge increase over the past decade in the number of researchers who have concentrated on these terms (burnout, compassion fatigue, compassion satisfaction, vicarious traumatization intrusion, avoidance and arousal) that relate to STS (Abendroth and Flannery 2006; Brosche 2003; Collins and Long 2003; Maytum et al 2004; Pfifferling and Gilley 2000; Sabo 2006; Schwam 1998).

These researchers have begun integrating other terms associated with secondary traumatic stress, a matter which has created conceptual confusion. However, those that are interchangeably used and associated with secondary traumatization include compassion fatigue, vicarious traumatization and burnout – many of the terms that are used primarily to express the impact of secondary traumatic stress have been used interchangeably (e.g. burnout and compassion fatigue) when in fact they may be different. Investigators (Brosche 2003; Collins and Long 2003; Maytum et al 2004; Pfifferling and Gilley 2000; Sabo 2006; Schwam 1998) have tried to analyse

the conceptual confusion within the trauma literature or differentiate between the terms related to secondary trauma. Consequently, the referenced concepts and analysis related to secondary traumatic stress disorder in this study are based on the limited available evaluation measures that have been developed by previous researchers (i.e. PTSD measured by Weiss & Marmar 1997; STS measured by Bride et al 2007; and compassion fatigue, compassion satisfaction and burnout measured by Stamm 2002).

0.0 Statement of the Problem

Widespread awareness of secondary traumatic stress, compassion fatigue, burnout and vicarious traumatization has been established in the literature due to an increased understanding and knowledge of the negative effects on or symptoms experienced by healthcare professionals who work with people who have been through traumatic events. Research has revealed that the necessity for mental health workers to listen to clients' and patients' experiences of human suffering may cause psychological symptoms, which in turn may lead to compassion fatigue, burnout, secondary traumatic stress and vicarious traumatization (Adams et al 2008; Steed and Bicknell 2001; Zimering et al 2003). Recent research indicates that between 5% and 15.2% of therapists experience secondary traumatic stress symptoms at clinical levels (Adams and Riggs 2008; Bride 2007; Kadambi and Truscott 2004). Mental health workers become more vulnerable to significant stress when they work with trauma victims, which can lead to many negative consequences that can affect their clients. Professionals who are affected by secondary traumatic stress are at a higher risk of making poor professional judgments than those who are not affected (Bride et al 2007b; Munroe et al 1995; Pearlman and Saakvitne 1995a; Stamm 1997).

Dutton and Rubinstein (1995) and Newmann and Gamble (1995) suggest that detachment and non-empathic distancing used by mental health workers to deal with clients' traumatic

experiences can lead to them feeling emotionally isolated and detached from the professionals that are trying to help them. Victim blaming (Astin 1997) and the disruption of empathic abilities that result in therapeutic impasses or incomplete therapies (Pearlman and Saakvitne 1995a) have also been found in the work of therapists who have suffered from secondary traumatic stress, compassion fatigue, burnout and vicarious trauma. The results of such ineffective care can be detrimental to the client who is seeking competent treatment. According to Herman (1992) psychological trauma theory posits that traumatic events can lead to psychological numbing, flooding and hyper-vigilance. Although these trauma effects occur as a defence mechanism (to give the traumatised person the ability to cope with the event), they can also lessen one's ability to function optimally in the following weeks and possibly months (Newman et al 1996). While there is much that we are learning about the causes and outcomes of mental health workers' exposure to their clients' trauma, there has been less focus on effectiveness of interventions. It is imperative for both the mental health worker and the clients with whom they work that effective treatment for mental health workers who experience negative effects from exposure to survivors' traumatic material is known about and available.

As mentioned earlier, secondary trauma is a term that explains the increasing transformative effect of the helpers and care providers who are dealing with survivors of traumatic situations. And for the reasons stated above, it was decided that the first aim of this study is to investigate the differences between a range of concepts that are associated with post-traumatic stress disorder (PTSD), such as secondary traumatic stress (STS), vicarious traumatization (VT), compassion fatigue (CF) and burnout (BRN). The second aim of this study is designed to explore the impact of secondary traumatization on healthcare workers and professional experience. The following questions will be also considered:

- (1) Do professionals who are exposed to physical trauma/injuries (A&E doctors, A&E nurses and ambulance technicians) as opposed to professionals exposed to psychological trauma (counsellors, social workers, psychiatrists and psychologists) experience different levels of STS, CF and BRN, including emotional distress, intrusion, avoidance and arousal?
- (2) Do professionals of contrasting backgrounds (including those of different gender, age and career experience) have different vulnerabilities, particularly regarding STS and its associated reactions?
- (3) Does work experience associate with manifestation of different symptoms of STS?

0.1 Significance of the Study

Every day healthcare professionals are traumatized by listening to their clients' stories and experiences, reflecting traumatic events in their own lives. Research has shown that this secondary traumatisation, as well as witnessing emotions felt by the client such as horror and fear, is responsible for the psychological problems and challenges faced by mental health professionals that have been defined as compassion fatigue, burnout, secondary traumatic stress, and vicarious traumatisation. Since these terms are used interchangeably in the literature, a combination of research that identifies the effectiveness of various interventions targeted to decrease symptoms of CF, VT, BRN and STS would be beneficial for the mental health community in United Kingdom and worldwide. Determining which interventions are more effective by synthesizing and combining studies using a systematic methodology and meta-analysis can add to and enhance the current empirical literature in the secondary traumatic stress research field/community.

Although research evidence for the relationships between job burnout and other consequences of indirect trauma exposure such as PTSD-like symptoms, compassion fatigue and vicarious traumatisation is accumulating, an overarching synthesis of these relationships is missing. By including a systematic review process and meta-analytic strategies in this current research, it will offer an option for evaluating the available literature. This study aims to systematically review and meta-analyse the strength of associations between secondary traumatic stress, job burnout and other psychosocial consequences of work-related indirect exposure to trauma in professionals working with trauma survivors.

To evaluate a cultural context, this research will explore differences between findings obtained in the United States and other countries, and also those gathered for research in English and non-English speaking regions. A synthesis of intervention (or outcome) research in the areas of compassion fatigue, burnout, secondary traumatic stress and vicarious traumatisation is both greatly needed and warranted. Including meta-analysis reviews in the current research will assist in filling the gaps in the literature and provide evidence-based recommendations to guide present and future practices and policies. It is imperative that the evidence of effects of interventions be amalgamated and analysed in order to inform current and future practices and policies that are in progress in all healthcare areas.

Chapter One

Literature Review: Part I

1.0 A Historical Perspective of Post-traumatic Stress Disorder

Previous research work (Birmes et al 2003) has suggested that post-traumatic stress literature began during the Babylonian times, with a particular king who showed grief reactions to the death of his closest friend. It was suggested that the king's experiences at that particular time were very similar to common symptoms of traumatic stress as presently described. Psychological syndromes after certain traumatic events have been defined and have raised a lot of debate in the past few decades (Shalev 2009). Trimble (1981) noted 'post-traumatic neurosis' in survivors of a ship explosion in Toulon in 1907, and signs of re-experiencing the trauma as well as manifestation of severe anxiety and nightmares. Furthermore, Shay (1991) indicated that post-traumatic experiences have also been mentioned in Homer's *Iliad* and *Odyssey* –representations of chronic PTSD were illustrated in portrayals of Odysseus's touching openness and evasion regarding traumatic disloyalty and defeat in the Trojan war (Shay 1991, 2002).

Shalev (2009) claimed that PTSD was recognized in the eighteenth century. Certainly, in the 1860s, medical doctors provided reports that indicated fatigue, anxiety and depression after life-threatening situations which they called 'trauma'. Enrichen (1867) cited in Shalev (2009) suggested a state known as 'railway spine'; this was thought arise from the physical trauma that occurred after railway crashes and accidents – trauma was observed and brought on by life-threatening physical injury and wounds around that particular time (Moore et al 2004). Further, German neurologist Hermann Oppenheim also re-conceptualized trauma as a disturbance not

purposely developed by physical damage but rather by exposure to life-threatening situations which ultimately materialized as ‘traumatic neurosis’ (cited in Lerner 2001: 83).

Soldiers’ experiences have also raised a great deal of interest in post-traumatic stress reactions. British and American cardiologists Arthur Myers (1870) and Jacob Mendez Da Costa (1871) recorded details of soldiers with chronic anxiety and dysphoria which were recognized as ‘irritable soldier’s heart’. At the end of the First World War, the syndrome was named ‘neuro-circulatory asthenia’, which contributed to weakness in muscles caused by the combination of neurological and cardio-logical/circulatory illness. However, since the signs were displayed even by soldiers who went through mild battle exposure and who did not have physical injury or wounds, post-traumatic stress was related to certain hysterical complaints. In 1915, British medical doctor Charles Myers investigated an unrelated cause of traumatic stress that had been later named ‘shell shock’ by troops in the First World War trenches and developed his theories further after the war. Disassociations between memory and sensory systems and also within sensory systems were caused by psychologically disjointed memories of intolerable physical and mental experiences (APA 1980, 1987) . Researchers also predicted later progress of cognitive behavioural interventions for post-traumatic stress disorder. Additional indications of PTSD have grown in response to war, major social or political upheavals throughout history and treatment methods have similarly evolved.

Following the Second World War traumatic signs were defined by terms such as ‘war neurosis’, ‘combat stress reactions’ and ‘combat fatigue’. These mainly described various symptoms such as over-activity, hyper-vigilance, startle reactions, difficulty in concentration and sleep problems (APA 1987). Despite having the clinical evidence of post-traumatic reactions, a precise category for PTSD was not taken into account either in the first Diagnostic and Statistical

Manual of Mental Disorders published by the American Psychiatric Association (APA - DSM I, 1952) or in the second (APA - DSM II, 1968). DSM I involved a categorization of post-trauma issues as ‘gross stress reactions’. Persistent reactions to trauma were thought to symbolize another section of disturbance, such as childhood neurosis. In DSM II, ‘gross stress reactions’ was totally removed and no other category was used as a replacement for post-traumatic stress disorders.

After the Vietnam War, efforts were made by various researchers and the American Psychiatric Association to include post-traumatic stress disorder in the DSM III (APA 1980). A more detailed definition of PTSD was given in the revised version of DSM III (APA 1987) – this was vital as it included an indication of traumatic stressors, ‘that is outside the range of human experience (i.e. outside the range of common experience as simple bereavement, chronic illness, business losses and marital conflicts)’ (p. 247). Additional revisions were added in the following edition (APADSM - IV, 1994). The meaning of trauma was changed to include unusual human experience, and a minimum requirement of one month duration was added. Survivor guilt in DSM III was not present (Shalev 2009). Furthermore, the indicator ‘psychological reaction to reminders of trauma’ was moved from the hyper-arousal criterion to the intrusion criterion. Lastly, the latest revision of DSM IV-TR (APA 2010) has combined an additional criterion demanding clinically significant distress or deficiency in daily functioning.

1.1 Diagnosis of Post-traumatic Stress Disorder

Post-traumatic stress disorder differs from other psychiatric diagnoses as it requires that a person is affected by, and experiences trauma associated distress from, a detailed form of trauma (APA 1987, 2010). Post Traumatic Stress Disorder is defined under the broad section of anxiety disorders in DSM IV-TR (APA 2010), and involves six diagnostic criteria of which each has

additional specifications. Moreover, a separate diagnostic section is also available – Acute Stress Disorder is listed in the DSM IV-TR, which helps especially to differentiate more anticipated or ‘normal’ stress symptoms from traumatic ones.

The first criterion of PTSD is that the person has to have gone through, witnessed or been confronted by a situation or situations that presented real or potential death, serious injury, or a threat to personal physical integrity or that of others. Also, the person must be experiencing an intense fear, horror or helplessness associated with the traumatic situation (criterion A). Normal life experiences can be interrupted by the triggering of stressors that reinforce memories of the traumatic event and the subject loses a grasp of objective reality (Olf, Sijbrandij and Opmeer et al 2009).

Criterion B, or re-experiencing reactions, requires the person to have the following: (1) intrusive, distressing recollections such as images associated with the situation; (2) repeated, distressing dreams or nightmares, (3) flashbacks or illusions, feeling or acting as if the situation is happening again, and (4) a great deal of mental or emotional distress. Regarding criterion B, it is vital to examine the quality of re-experiencing reactions. For example, the re-experience has to be a perceptual one, not an actual experience over which the person has no control. Also, the perceptual superiority of the re-experience has to be different to that of telling a story (Ehlers and Clark 2000).

Criterion C discusses the avoidance symptoms which indicate that the person has to constantly avoid trauma-associated stimuli and experiences a numbing of general responsiveness. The avoidance reactions must display at least three of the following: (1) trying to avoid emotions, thoughts or discussions associated with the situation, (2) tries to avoid activities or places that bring back memories of the event, (3) an inability to remember a vital feature of

the situation, (4) loss of interest or involvement in anything important to the patient, (5) emotions of detachment or isolation from other individuals, (6) feelings of numbing that are considered to limit the ability or inability to feel strong emotions like love, (7) a ‘sense of foreshortened future’ (i.e. the person views life opportunities as cut short or categorized as a lack of marriages, job or children). These reactions are also associated with severe arousal conditions or the fight or flight reactions to stress. Re-experiencing the trauma, or persistent efforts to avoid related stimuli, result in detachment from associated experiences, which then becomes a general feature of the person’s everyday life. As this condition persists, an individual’s life becomes ever more restricted. In line with this, studies (O’Donnell et al 2004) have found confirming evidence that PTSD, in most cases, co-occurs with depression.

Hyper-arousal reactions criterion D of the diagnosis and require the person to be experiencing at least two of the following symptoms: (1) difficulty in falling or staying asleep, (2) irritability or anger outbursts, (3) decreased concentration, (4) hyper-vigilance, a condition in which the person is extremely alert and on guard when it is unnecessary, (5) increased startle reaction, categorized by severe behavioural and physical responses to stressors. Hyper-arousal reactions highlight the continuous fight or flight condition in which the person’s reactions mimic the real reactions given at the time of the traumatic situation. Therefore the person’s daily life is exceedingly disturbed and he/she in turn tries to deal with such high levels of arousal in a maladaptive manner that further avoidance and numbing reactions are triggered (criterion B) (Olf et al 2009).

Meanwhile, criterion E is concerned with the duration of the symptoms. For PTSD diagnosis, the reactions described in criteria B, C, and D must have been apparent for at least one month. Immediate evaluations after the trauma display high rates of PTSD-like reactions in

trauma survivors, but these rates have been found to decrease and then stabilize over time (Gutner et al 2006). Therefore a differential diagnosis would be dependent on the time duration of the reactions. For example, PTSD reactions which last more than one and less than three months are defined under the subcategory of acute PTSD. If the reaction persists for at least three months then the diagnosis becomes chronic PTSD. Furthermore, if the reactions continue for at least six months after the trauma, the condition is described as delayed onset of PTSD.

1.2 Time Course of Post-traumatic Stress Disorder

Examinations of reactions regarding time duration are very important in recognizing the nature of stress and assessing the causes of the stress reactions. A great deal of research has indicated that PTSD reactions are very common immediately after a serious traumatic experience. Foa and Rothbaum (1992), for example, examined rape victims within a week of the trauma experience and discovered that 94% of victims had severe post-traumatic stress symptoms. Similarly after the 9/11 attacks, New York City inhabitants reported high rates of PTSD symptoms which later decreased (i.e. after six months) (Delisi et al 2003; Galea et al 2003; Schuster et al 2001). Several authors (Kessler et al 1995; North et al 1999) have suggested that most subjects reporting PTSD display recovery in the first year after the trauma experience. Nevertheless, survivors who do not recover in the first year are more likely found to be suffering from other psychological disturbances additional to PTSD (Nemeroff 2006).

So what makes some people more vulnerable than others to post traumatic stress disorder? There is not a single explanation; however, there are recognized risk factors. It has been suggested (Ehlers and Clark 2000; Freedman et al 1999; Nemeroff 2006) that situations and circumstances experienced after trauma play a role in the course of PTSD reactions and/or symptoms. Persistence of trauma and experiences of new traumatic events, subjective appraisals

of the situation (i.e. thinking of self as weak or guilty), and the level of available social support can help reduce PTSD reactions. Therefore, time duration is strongly related to both external and internal factors, which should be specifically taken into account in treatment formulation.

1.2.1 Prevalence

Breslau (2002) and APA (1980, 2010) have defined a traumatic situation as any kind of circumstance that is outside the range of common human experience and that would be anguishing for everyone. When DSM IV was introduced, the description of traumatic situations was widened to include those that were not only experienced but also witnessed (APA 2000). Therefore, research facilitating DSM IV criteria provided higher rates of prevalence (Breslau 2002; Rosen et al 2008). Later evaluations of traumatic reactions to a specific trauma indicated dissimilar prevalence rates. Earlier reports took into account 'normal' responses to trauma as signs of post-traumatic stress disorder, so overestimated PTSD rates (Vázquez et al 2006; Whalley and Brewin 2007, Whalley et al 2007). In addition, Blanchard et al (2004) stated that the moderating role of the exposure of the evaluation, so, the closer the individual exposure is to the traumatic experience; the more possibility individuals display severe reactions. For that reason, it is essential to think of these factors as well other distal factors which will be reviewed later when discussing other prevalence studies.

The first universal population sample examining exposure to traumatic situations was accomplished by Breslau et al (1991). The participants of this study were reported to have experienced at least one traumatic situation in the course of their life, the most usual ones being severe injury or serious accident (9.4%), physical assault (8.3%), seeing somebody severely injured or killed (7.1%) and sudden death or injury of a close friend or relative (5.7%). Using DSM III criteria, Breslau and his colleagues also evaluated PTSD in this sample and found that

39.1% of the subjects had developed post-traumatic stress and 9.2% of the whole sample met the criteria for a lifetime post-traumatic stress disorder. Later, several other studies (Kaminer et al 2008; Kessler et al 1995; Resnick et al 1993) conducted and evaluated life course prevalence of PTSD and discovered nearly the same rates as those reported by Breslau et al (1991) (that is, experience of any traumatic situation ranged between 39.7% and 51.2%, and developed PTSD being within the range of 7.8% and 13.8%).

Later epidemiological studies (Blanchard et al 2004) adopted DSM IV and DSM IV-R criteria in evaluating reactions to trauma including emotional reaction – persons' individual views and reactions to comparable situations – and developed a broader range of trauma situations. The research (Blanchard et al 2004; Van Ameringen et al 2008) adapting this wider description reported higher rates of exposure to traumatic situations, estimated to be within the range of 70.2 % and 89.6%. Van Ameringen et al (2008) predicted that the rate of lifetime exposure to trauma is within the range of 50% and 90%, and lifetime rate of PTSD is within the range of 5% and 10% (Frans et al 2005; Kessler et al 2005; Van Ameringen et al 2008). Galea et al (2003) reported six months after the 9/11 attacks and found that 5.3% of New York City residents continued to meet criteria for sub-syndrome PTSD, a state linked with considerable functional impairment. The rate was even higher, 14.3%, among emergency and rescue team members who were exposed directly to trauma. Similar rates were also reported by Johnson and Thompson, (2008).

Further studies such as the National Vietnam Veterans Readjustment Report (NVVRS 1988; Kulka et al 1990) evaluated PTSD and other mental illnesses among war veterans that served in the US military in Vietnam. The outcome of this particular NVVRS study showed that 21% of males and 27% of females developed PTSD once in their lifetime. Similarly, Kang et al

(2003) used a sample of Gulf War veterans and reported a prevalence rate of 12%. More chronic cases were also reported ten years after the war – 15% of males and 9% of females met the criteria of PTSD. More recently, with wars in Iraq and Afghanistan, Hoge et al (2004) examined PTSD amongst deployed soldiers. Using non-deployed soldiers as a control, they reported that 20% of those who saw service in Iraq had symptoms. A follow-up study conducted by Hoge et al 2006 also discovered that female war personnel showed more mental health problems than male participants. In both of these studies, symptom severity was positively linked with the amount of trauma exposure.

1.2.2 Demographic Variables

Gender differences have been repeatedly reported in the experience of traumatic events, where males were reported to be more likely to experience trauma than females (Kessler et al 1995; Stein et al 1992). Other gender issues are that males and females indicated to be different in their likelihood of experiencing certain types of trauma. Males were shown more prone to go through physical assault and combat experience whereas sexual assault and molestation were discovered more common among female reports of trauma. Overall, community studies (Breslau et al 1991; Frans et al 2005; Holbrook et al 2002) found higher rates of PTSD in females than males. However, Pimlott-Kubiak and Cortina (2003) stated that prevalence rates in females were higher not due to problems purposely related with gender but rather other factors like exposure history or intentionality of trauma might play a part in females' attributions of the experience, which then might result in an increased vulnerability to PTSD. It should be noted that when both males and females are exposed to extremely intense trauma, there is often no difference displayed in reactions and/or the development of PTSD between the sexes (see Kendler et al 2004). Tolin and Foa (2006) suggested that females might be more prone to traumatisation than males, and that

this might account for elevated PTSD rates in females. However, this does not appear to be the case – in fact, some epidemiological studies have reported the opposite (e.g. Breslau et al 1991; Norris et al 2003). When ‘trauma’ is reflected as a unitary category, females are almost one-third less prone to display a trauma than males. Thus, the higher rate of PTSD in females cannot be explained by a greater overall risk of trauma.

Tolin and Foa (2003) suggested that perhaps the critical issue is not whether females are more prone to experience trauma than males, but rather whether they are more prone to experiencing certain kinds of trauma, especially sexual abuse and assault that are commonly related to a high probability of PTSD. Across several studies, women seem more prone than men to report sexual abuse and assault traumas (Boney-McCoy and Finkelhor 1996; Breslau et al 1999; Norris 1992; Perkonigg et al 2000; Tolin and Foa 2006). The overall higher rate of trauma among males, therefore, seems to be due to a higher risk of non-sexual traumatic events, whereas females are more likely to display higher rates of sexual traumas.

Other research (Whalley and Brewin 2007) has argued against Tolin and Foa’s (2006) report suggesting that among victims of adult sexual assault, very few studies showed any significant difference in rates of PTSD between men and women – among both adults and children who reported child sexual abuse, women and girls remained almost twice as likely to meet the criteria for PTSD as were men and boys. However, gender comparisons of PTSD across traumatic incidents more commonly associated with men (non-sexual assault, accidents, combat, disaster or fire, witnessing death or injury) also showed that women exposed to these traumas were more likely to meet criteria for PTSD than were men (Tolin and Foa 2006). These outcomes explain that the greater prevalence of PTSD among women cannot be attributed to a higher risk of sexual assault traumas. Rather, the prevalence rates among females were increased

not due to issues specifically related to gender but instead to other factors such as exposure history or trauma intentionality, either of which might make them more vulnerable to PTSD (Pimlott-Kubiak and Cortina 2003). Furthermore, when the trauma was experienced extremely intensely, there was no difference between men and women in the likelihood of developing PTSD (Kendler et al 2004).

1.3 The Psychological Oriented Theories of PTSD

The initial paradigm of psycho-dynamic theory was highlighted by Freud (Freud and Breuer 1895) in his theory of neurosis. Breuer and Freud (1893) studied hysteria and indicated that patients who had early childhood trauma memories are likely to manifest distress. Freud's theory of 'psychoneurosis', argues that 'personality structures resulting from defensive attempts to deal with traumatic experience in childhood are more likely to predispose the individual to later psychopathology' (Davis 1994: 492). Based on his clinical observations, Freud (1920) amended the statement above and suggested a theory of neurotic symptoms with imagined fantasies of infantile sexuality and the connected internal affective pressure that troubles ego functions. Freud's work also with veterans of the First World War highlighted his view on psychological trauma and 'intra-psychic trauma'. In both cases of trauma, the denominator is the trauma forcing the ego functions, but in Freud's view on war neurosis (also called traumatic neurosis), the threat is usually of an external nature (Freud., 1920, 1926). According to Freud (1926), the neurotic symptoms of the trauma reflected in the individual's fixation on the moment of the traumatic event, leaving the individual in a state of helplessness and extreme anxiety. Such a state was argued to be similar to the state of tension that a baby experiences in the absence of a caregiver in the very early years of life, when the ego functions are not yet well developed. Freud therefore considered a post-traumatic state as an extension of early experiences, which can be

triggered by a traumatic experience later in life. In other words, actual trauma experience and the associated stress often leave the individual overwhelmed and the ego functions depleted. Outcomes would be an irreconcilable imbalance between internal struggles and the external events leading to the individual showing further trauma avoidance.

Freud's early work (Freud and Breuer, 1895) and main theoretical arguments on trauma did not specifically explain PTSD. However, these initial theoretical frameworks were used as a benchmark to conceptualize treatments for war survivors through the recognition of the effect of a traumatic event on internal coping mechanisms, work which ultimately paved the way for later developments in psychoanalytic theories (see Dayan and Oliac 2010; Ford 2009; Freud 1942).

1.3.1 Ego Psychology and Control Mastery Theory

Anna Freud (Emery and Emery, 1985; van der Kolk 2000) was a pioneer of the ego psychology field. Her work concentrated on the part of the ego and its defences in the growth and maintenance of the stability of the psyche. Anna Freud and associate workers in the field (Emery and Emery, 1985; Bellak et al 1973; Hartman, 1958; Kleespies et al 1999; van der Kolk 2000) indicated that in situations of post-traumatic stress, the dynamic connection between internal and external realities, along with the subjective determinants of the condition play a vital role in the reaction to trauma and can be very well comprehended in terms of the development of ego purposes that control the self. The development and maturation level of ego defences has also been researched in depth (Bellak et al 1973; Hartmann 1958; Kleespies et al 1999) and through diverse developmental approaches (Erikson 1968; Piaget 1983; Weimer et al 1977). These last three researchers were equally involved in the overall development of this research field. Also, the hierarchical construction of the defences which depend on the maturity of the subject has also been the subject of empirical research (Kleespies et al 1999; Weimer et al 1977).

The general argument now is that people interpret their own experiences of serious life episodes with their individual personality traits and perceptions of events (Wilson 1983). And when it comes to extreme trauma, the traumatic process is reproduced in a way different to the original episode with the purpose of keeping the self-esteem intact. Therefore, a person's demonstration of a destructive trauma and the preservation of self-esteem are held in different mental constructions. If emotional defences are triggered by stress or are misused, the person will end up collapsing into two accounts of trauma and the perception of external reality related to the self will happen in an illogical, distorted manner (Emery and Emery 1985).

For ego psychologists working with control mastery theory (Weiss 1993) the emphasis here is on the level of thought and control. The theory is a treatment model obtained from ideas of ego psychology. The model suggests post-traumatic stress as the 'survivor guilt' that results from a person's pathogenic, conscious or unconscious beliefs regarding the traumatic experience. The model was thought of as being helpful to conceptualize treatment for people with post traumatic stress disorder because they experience complexity in cognition, belief and trusting others (Okey et al 2000), particularly in situations of interpersonal trauma. Therefore, as the theory suggests, the therapeutic relationship becomes the fundamental mechanism in the patient's transformation of pathogenic beliefs and treatment (Weiss 1993, 2003).

The aim of therapy in this approach is initially to set up a safe therapeutic environment and from there to assist the client to build up ego potency, and release his/her dependence on maladaptive defences. Secondly, the patient is worked with to increase insight and develop an understanding of the hostile and his/her negative representations of the self and the incident. This is all with the aim of processing the dissociated aspects or the negative representation in the less threatening therapeutic process (Emery and Emery 1985; McWilliams 1994).

1.3.2 Object Relations Theory Model of Post-traumatic Stress Disorder

Brende (1983) studied post-traumatic stress disorder reactions of Vietnam veterans and indicated the similarities in character pathologies between veterans and people with disorders of self (i.e. narcissistic or borderline personality disorders). The fundamental resemblances which were discussed included outbreaks of anger, individuality diffusion, consumption of primal defences, a sense of meaninglessness, disturbed emotional responses, idealization and devaluation.

The Object Relations Model of PTSD indicated that extended and extensive stress had an effect on a person's identity – the person might be recognized with the trauma and develop more of a protective identity (Brende 1983). Leaving the security of the 'mother country' and experiencing threat outside the homeland were linked with the malfunction of the separation-individuation process. For some war veterans, not having the ultimate support at home or the mother country and serving under unsuccessful military leaders may create complexity, and hence diminish values, emotional expressions and triggers 'splitting' in the individual identity or personality.

Wilson (1983) added to the theory that in cases of war trauma, veterans go through tremendous stress in the developmental phase of their identity creation versus role confusion (Erikson 1968). Battle experienced in this phase disrupts a person's normal identity construction and leads to identification with the aggressor, a condition ruled by the person's self-critical behaviours which Brende (1983: 203) called 'killer self'. Brende (1983) wrote that in addition to the aggressive, domineering identity, a protective self is additionally developed in combat veterans. Peterson et al (1991: 91) suggested that it emerges amidst symbiotic relationships within the combat unit, and included the introjections of the other members to such an extent that the loss of friends within the combat unit was felt as a loss of part of the self.

The aim in the object relations theory model of PTSD is to ease the combination of the trauma and the self (Brende 1983). This procedure, which was also named ‘traumatic revivification’ (Brende 1983) includes reviving the traumatic occurrence and restructuring it in a correct but less distressing form – that is, in the context of therapy (Brende 1983).

1.3.3 Social-cognitive Theories of Post-traumatic Stress Disorder

Horowitz’s work (1986) focused on thoughts, images and moods in situations of loss and trauma. The researcher was one of pioneer theorists in secondary traumatic stress studies who concentrated on the impact of trauma on broader beliefs about the self, the world and the future. Even though his theory has roots in psychodynamic studies, it indicated far-reaching cognitive alteration in recovery from PTSD. Horowitz’s perspective was identified as social-cognitive theory (Brewin 2003). The social-cognitive theory indicated that when dealing with trauma, the very first response of people is outcry. That is the first phase is when the person’s mind assess threats quickly and physiological and emotional reactivity either follow or accompany the cognitive processing. Secondly, the person tries to put together the new trauma information with a pre-existing belief system. However, due to the information overload and its emotional force, people might not be capable of including trauma memories, such as images and thoughts, into their memory system. In response to tension due to this contradictory information, the person’s defence mechanisms take over so that the individual can avoid trauma memories and emotional pain. This is called the denial phase, in which the person might be rigid in organization of thoughts, feel numb and avoid reminders of trauma.

Furthermore, the social-cognitive theory states that people hold a ‘completion tendency’, that is the psychological requirement to match the trauma experiences with the pre-existing ones, and this tendency settles old and new information that leads to the intrusion of trauma memories.

The person possibly will be hyper-vigilant, have trouble in concentrating and go through emotional distress reactions, as well as uncertainty – as if actually experiencing the situation. This intrusion phase allows the person to process the pre- and post-trauma experiences consciously (Horowitz 1986). The person therefore fluctuates between avoidance and intrusion of the trauma and this fluctuation stage (called working through) gives the person a chance to rebuild the figurative organization. As the person fluctuates, the severity of each stage reduces. The completion phase comes with the adjustment of old and new memories which in the end will be consistent with the individual representations of the self, the world and the future. On the other hand, failure to process traumatic experience leads to post-traumatic reactions since information about the trauma stays active in the memory and continues to interrupt thought processes and cannot be avoided.

Concise psychodynamic psychotherapy proposed by Horowitz (1986) targets the cognitive and emotional issues brought up by the trauma and how they are associated to the person's early experiences. During the whole procedure, the therapist will help the patient to discover recent life experiences which are setting off traumatic memories. Talking about the trauma with the support and compassion of the therapist enables the patient to process the trauma with more useful skills to handle emotional disturbances and integrate the trauma with pre-existing memories. The most commonly-used concepts of brief psychodynamic therapy are denial and catharsis (Horowitz et al 1997).

1.3.4 Theory of Shattered Assumptions

This theoretical perspective (Janoff-Bulman 1992) is based on the assumption that individuals actively build their shattered selves and the world, and new information would be given meaning based on their own representation of the world. Janoff-Bulman (1992) suggested that there are

three basic assumptions influencing a person's responses to trauma. These are, in general; the world is kind, meaningful; the self is worthy; and people are by nature good and moral. According to the theory, when people go through new situations that involve conflicting information, their basic and deeply held beliefs about the world are shattered. Moreover, Resick and Schnicke (1993) stated that traumatized people go through primary feelings like anger, fear or sadness which are linked with the real trauma or loss. But there are secondary feelings like guilt and shame which are built on the person's perception of the situation. These secondary feelings prevent the primary feelings from being enacted and trauma processing becomes harder – the secondary feelings that have taken over are not directly based on the trauma. Later, it gets more difficult for the person to alter his/her life after the trauma. A way of resolving this would be through recreating the belief system by reinterpreting the traumatic situation in a manner to minimize variation between old and new beliefs (Janoff-Bulman 1992).

According to the theory of shattered assumptions, individuals who hold mostly positive experiences and therefore who hold mostly positive beliefs about the world, are more prone and likely to manifest post-traumatic stress responses (Resick 2001). Janoff-Bulman (1992) opposes this assumption stating that individuals who have mostly positive experiences feel more distress initially, but it is easier for them to get better. And in cases of previous trauma, if the person did not reinstate a safe, dependable belief system, he/she will be more likely to experience vulnerability (Cromer and Sachs-Ericsson 2006; Putnam 2003). Positive reframing of the trauma and the understanding of personal development are also vital in the processing of the patient reconstructing a belief system (Brewin 2003).

1.3.5 Conditioning Theories

Although conditioning theory does not specifically distinguish PTSD from other anxiety disorders, it provides crucial explanations regarding prominent features of PTSD such as physiological and emotional reactivity triggered by conditioned stimuli of trauma, and the central role of avoidance in the maintenance of symptoms. However, the theory (Pitman et al 2000) is less useful in understanding underlying cognitions, and emotions other than fear, such as shame and guilt.

Mowrer's two-factor learning theories of classical and operant conditioning were used to clarify post-traumatic symptoms (Becker et al 1984; Keane et al 1985). It was proposed that during processes of stimulus generalization and higher order conditioning, stimuli other than traumatic ones (conditioned stimuli) acquire the ability to bring out responses of fear and anxiety (conditioned responses) as if the event was actually happening. If the person does not avoid the spontaneous memories of the trauma or distract attention away from them, repeated exposure will naturally extinguish the conditioned associations. However, in reverse cases, the extinction process cannot be completed, and the individual's attempts to avoid or distract from trauma memories will be further reinforced by a reduction in fear and anxiety. Keane et al (1985) also provided additional explanations for post-traumatic stress symptoms. For example, it was argued that amnesia for several aspects of trauma could be due to avoidance of thinking about the event, and also it is harder to recall the trauma when an individual is in a different mood state.

1.3.6 Integrative Theories of Post-traumatic Stress Disorder

Information processing theories (Creamer et al 1992; Foa et al 1989) have concentrated on the particular way a traumatic situation is brought up in the memory. The aforementioned and highlighted research work has indicated that if the traumatic situation is not processed in a

suitable way, it is likely that post traumatic psychopathology will take place. Like social-cognitive theories, information processing theories emphasize the thriving incorporation of traumatic occasion into the larger memory network. However, information processing theories reflect on the characteristics of the traumatic occasion as the foundation of the difficulty in integration, whereas social-cognitive theories focus more on the conflict between newly arriving information and the pre-existing belief system (Barlow 2008).

1.3.7 Neuropsychology and Dual Representation Theory

It has been suggested that the hippocampus specializes in the learning of context and the relational properties of stimuli. More specifically, it is responsible for integrating the separate features of an episode to make a coherent and organized whole (Kesner 1998). Moreover, Brewin et al (1996) argued that hippocampal functions are particularly associated with memories of conscious experience. From the perspective of dual representation theory, hippocampal processing is a crucial aspect of verbally accessible memories (VAMs) that enable conscious appraisal and communication concerning the trauma. However, the hippocampus is highly sensitive to stress with its intense network of receptors that are occupied with stress hormones, or glucocorticoids (Brewin 2003).

Despite the association of explicit memory with hippocampal function, implicit memory is not associated with the functioning of a particular brain region. With characteristics of being automatically retrieved and difficult to control, involuntary memories in PTSD, as in situational accessible memories (SAMs), might be related to implicit memory. As dual representation theory suggests, flashbacks and fear conditioning are products of SAMs and also the amygdale. However, fear-related information is transferred to the amygdale via different routes, independent from the hippocampus. The pathway from thalamus to amygdale has less

sophisticated capacity and thus would be able to transmit lower-level sensory stimuli. This would make it more difficult to deliberately recall memories formed like that (Brewin 2003). The functioning of the amygdale, in contrast to the hippocampus, is enhanced with high levels of stress (Pitman et al 2000). Therefore, it is possible that memories in the SAM system might be enhanced when memories in the VAM system are impaired. These two memory systems and the effect of stress in them are thought to provide the neural basis for VAMs and SAMs.

As predicted by dual representation theory, these two memory systems exist simultaneously and are individually distinguishable in individuals with PTSD by their emotional content, meanings associated with emotions and related behaviours. This lack of concurrence and the inhibitory processes among these systems prevents the establishment of coherence in the organization of the memory system (Brewin 2003). Brewin and colleagues (Brewin et al 2003) argued that for cases in which SAM is the main system driving primary emotions, exposure therapy might be sufficient, providing concurrent activation of two systems. However, if the individual has distorted cognitive appraisals and accordingly if secondary emotions such as guilt, or shame, are present, cognitive restructuring might be needed in addition to exposure therapy. In the latter, the goal is to activate and make retrieval easier for positive self-narrations (Brewin 2003). Therefore, in order to facilitate the reconstruction process, imaginal rehearsal, active processing with trauma narration (Resick and Schnicke 1993) and cognitive restructuring (Ehlers and Clark 2000) might be implemented through sessions. Reliving experiences in sessions provides connection and active modification of pre-traumatic appraisals in the present. Additionally, negative post-trauma beliefs are targeted with the aim of integrating pre- and post-trauma appraisals into a comprehensive framework.

1.3.8 Cognitive Model of Post-traumatic Stress Disorder

Ehlers and Clark (2000) suggested a cognitive model of PTSD that concentrates on threat and memory. They paid attention to negative evaluations of the traumatic occasion and a diversity of surviving methods that play a role in the path of the disorder. They argued that despite the fact that the traumatic occasion took place in the past; people with PTSD are not capable of perceiving the occasion as having happened in the past. For that reason, people with PTSD go through the trauma-related information in a sense that brings up an existing threat, which might be either an external threat to their safety or an internal threat to their selves and the future.

Building on emotional processing theory (Foa and Rothbaum 1992) and anxious apprehension model Ehlers and Clark (2000) suggested a diversity of negative assessments. Some of them are linked to the traumatic occasion such as overgeneralization of threat to present and future, or negative assessments of own actions (i.e. thinking of the self as deserving that trauma). Some of them may be further focused on trauma which includes the person's acknowledgments of their selves, other people, or life views. These negative evaluations, involving danger or violation of standards of the self, others or life are strongly associated with emotion reported by people with PTSD.

Additionally to negative evaluations, Ehlers and Clark (2000) indicated 'mental defeat' which is a risk factor for the person's considering the self as weak, ineffective or powerless to protect oneself. Such a condition is considered to be linked with previous experiences, so that previous traumatisation, or feelings of weakness and helplessness, increases the risk of future traumatisation. Ehlers and Clark also tried to clarify the evident memory disturbance in people with PTSD. As also discussed in dual representation theory (Brewin 2003), Ehlers and Clark suggested that since the memory attained at the time of trauma is complicated and inadequately

integrated with other memories of the trauma regarding details, time and context, people with PTSD have poor autobiographical memories – memories are kept sectioned and do not have a time framework. Also, as discussed in emotional processing theories (Foa and Rothbaum 1992), strong associative learning among traumatic stimuli results in triggering of memory sections which also might be linked with fear.

At the same time, Ehlers and Clark (2000) have suggested that strong stimulus-stimulus (S-S) and stimulus-response (S-R) associations regarding traumatic events result in the individual making (sometimes pre-consciously) predictions about future sources of danger. In that sense, they distinguished two types of processing – the first is data-driven processing that is focused on sensory material; the second is conceptual processing that is focused on meaning, organization and place of the event depending upon context. The former is considered as a pre-trauma risk factor associated with the individual's tendency for strong perceptual priming and memory that is difficult to retrieve intentionally. Various maladaptive coping strategies are also emphasized, which further reinforce the symptoms of PTSD. Among these strategies, behavioural ones involve active attempts at thought suppression; distraction; avoidance of traumatic material; use of alcohol, other substances or medication to control anxiety; and giving up daily activities. In addition to these, one might find selective attention to threat cues; rumination about the trauma; and dissociative responses, all regarded as self-defeating cognitive styles. Ehlers and Clark (2000) provided a detailed description for a treatment rationale with three elements. Firstly, all of the individual's symptoms are reviewed and it is explained that some aspects of the symptoms, at least, are common initial reactions to trauma. Secondly, the individual is told that coping strategies used up to that point are useless for his/her distress and that they have probably been responsible for maintaining disturbance factors. Thirdly, the treatment processes are described

fully – factors maintaining the trauma will be reversed through both behavioural interventions and cognitive restructuring as the key elements in predicting change.

1.3.9 Genetic Predisposition of Post-traumatic Stress Disorder

PTSD is a complex disorder that is associated with changes in physiology, behaviour, cognition and emotion (Keane et al 2006; Stein et al 2001; Yehuda et al 2001). Therefore, genetic influence on PTSD has been studied (Schuster et al. 2001) in a variety of aspects of the disorder. Several studies have suggested that some inborn genetic factors might predispose individuals to develop post-traumatic stress symptoms after traumatic events (Keane, Marshall and Taft 2006; Yehuda 2001). Family studies found increased likelihood of PTSD for parents whose child developed post-traumatic stress disorder (Koenen 2007). Yehuda (2001) showed that adult children of parents of Holocaust survivors were more likely to develop PTSD than the adult children of parents without PTSD.

In addition to family studies, twin studies (Chantarujikapong 2001) suggested considerable heritability for PTSD. A large twin study with the Vietnam-era twin registry found 38% genetic variance attributable to PTSD and panic disorder and an additional 15% genetic variance attributable specifically to post-traumatic stress disorder. A more recent study with identical and fraternal twins found genes accounted for the 33% of the risk of developing PTSD (Koenen 2007). Therefore, there is considerable heritability in PTSD, such that not all people exposed to the same or similar traumatic events develop PTSD. However, while the role of genes in developing PTSD should be kept in mind, a conclusion for a causal association would be premature. PTSD has a variety of symptoms and many of them are shared with other anxiety and mood disorders. Moreover, so far no single gene has been identified as associated specifically with PTSD (Koenen 2007).

It is therefore better to consider genetics as a vulnerability factor for PTSD and question how genetics interacts with particular traumas and environmental factors (Ford and Russo 2009). Newer models of biological and evolutionary investigations differentiate between chronic and acute stress as opposed to the specific content of the stressor. Biological and evolutionary reports indicate that the negative effects of chronic stress are likely to decrease rapidly when the stressors are removed (Yehuda et al 2001), while the negative effects of traumatic stress often last for decades, or the rest of the life of the individual. But the focus on the negative outcomes of stress carries on oversimplifying the nature and implication of the traumatic reaction and non-traumatic stress. Evolutionary psychology also indicates that a traumatic stress reaction is an inherited reaction to excessive conditions of arousal that can result in negative or positive outcomes for adaptation, alteration and well-being depending on such matters as genetic inheritance, individual experience, and socio-cultural states. Such an approach has proved that a minority of people (10–35%) that are exposed to a traumatic occasion will develop some sort of pathological disorder and that the majority of those people who develop PTSD will get rid of their symptoms within 6–16 months without treatment while the majority, if not everyone, will experience some positive or adaptive effects in the form of post-traumatic growth (Hosin 2015).

1.4 Biological and Evolutionary Theories that Explain the Difference between Trauma and Stress

In recent years, there has been an increase in the integration of psychological, biological and socio-cultural studies regarding traumatic stress reactions. Combining these three elements when studying trauma and stress offers a comprehensive perspective and hence an understanding of this complicated association of psychological development and pathology. As discussed earlier, stress is a condition of arousal (in response to an environmental stressor), illustrated by bio-

psychological modifications that have negative or positive outcomes for adjustment and well-being Christopher (2004). Humans have complex biological systems for reacting to environmental stressors. From an evolutionary perspective, the prime stress response is what Canon (1914) first described as the ‘fight or flight’ response.

According to (Christopher 2004), traumatic and stress reactions are better understood from an evolutionarily point of view which reconstitutes the notions of self, society and nature where learning normally takes place. Evolutionary psychology explains the self and the mind as developing possessions of the socio-biological interaction of the brain’s subsystems, each of which evolves and expresses itself in adaptation with the environment (Cosmides and Tooby 1997). Within clinical psychology, trauma is defined as an intense appearance of stress. The process of trauma takes place in the amygdala, and it is caused by subjective experiential factors rather than the objective nature of the situation. The DSM-III defines trauma as an event that is unusual or ‘out of the normal range of experience’. This definition has been problematic because researchers argue that not every extraordinary or abnormal event is traumatic. For example, relocating to a new country and culture can possibly cause stressful situations that are abnormal to one’s normal experiences. Furthermore, studies have reported that in modern society, trauma exposure is frequent and liable to be experienced in various environments – usually individuals face one or more traumatic situations in a lifetime. For example, children and adolescents are generally susceptible to trauma because they are not as developed or experienced as adults. Sources and frequency of trauma are numerous and diverse and that is in addition to such factors as natural disasters, war, accidents, criminal violence, domestic violence, disease within the family and community, neglect and emotional abuse.

Data from the second National Incidence Study (NIS-2) conducted in 1986 reported instances of child maltreatment at between 14.8 and 22.6 per 1000. This figure can be much higher because violence against children within the home and community in the United States is higher than in any other country. Furthermore, homicide is the second leading cause of death for those between the ages of 15 and 24, and in black-dominated communities in certain neighbourhoods it is the leading cause of death before the age of 25 (Richters and Martinez 1993). For adolescents, the number of deaths caused by gun crimes is the highest of all possible deaths (Christofer 1990).

The research conducted by Richters and Martinez (1993) on children who had witnessed and experienced brutality in a violent neighbourhood (based on official crime statistics) discovered that 9% of first and second graders and 14% of fifth and sixth graders had been witness to a shooting, and 25% and 43% respectively had witnessed a mugging. Bell and Jenkins (1993) surveyed 536 black children in the second, fourth, fifth and eighth grades in Chicago schools and reported that 26% of the youngsters had witnessed a shooting and 30% had witnessed a stabbing. Bell and Jenkins also conducted a study among high school children and discovered that 75% of the students had witnessed one or more violent crimes: 23% witnessed a murder, 39% witnessed a shooting, 35% witnessed a stabbing, 11% had been shot at, 3% reported being shot, 4% said they had been stabbed and 2.5% reported being sexually assaulted.

In the research of Singer et al (1995), it was found that in certain neighbourhoods, 82% of children had witnessed stabbings and 49% had witnessed either a shooting or they had been shot at. Furthermore, Hernandez (1992) sampled 3,178 students and 10% reported sexual abuse (2% incest, 6% outside family, 3% inside and outside family). And while these figures of trauma exposure are lower in other societies and the evolutionary norm is much less than these numbers,

it is vital to note that violence, accidents and natural disasters have been part of human existence from its beginning and for this reason evolutionary psychologists suggest that individuals have developed a specific response mechanism for trauma. Taking these outcomes into deliberation, the DSM-IV altered the description of trauma and the criterion for PTSD by differentiating traumatic experience that involved life-threatening or bodily threatening situations. This approach is limited because while it identifies a traumatic incident out of the normal range, it does not identify threats to the self that can still be considered traumatic even if they do not directly involve physical danger. For example, witnessing the results of a destructive hurricane where people lose their homes and some are killed can be traumatizing, even if one is physically safe and/or removed from the event.

1.4.1 Adaptive versus Maladaptive Trauma Responses/Reactions

The maladaptive consequence of trauma is the inability to sufficiently alter the normal adaptive trauma reaction that results in symptoms or reactions comprising severe dissociation, intrusive re-experiencing of traumatic material and events, extreme avoidance, severe hyper-arousal, unbearable anxiety, severe depression, substance misuse and/or addiction, and even psychotic breaks with reality. The positive effects of trauma appear in three types (Tedeschi et al. 1998). The first involves identification of a sense of self, self-reliance and resilience when dealing with life's unexpected trials. The second involves changed relationships with family, friends and a partner, reconciliation of previously estranged relationships, a strong desire to protect oneself, greater altruism, an improved willingness to accept help, improved sensitivity to people and an improved openness to new behaviours. The third type of positive change following trauma includes an improved appreciation of one's existence, changed priorities, stronger beliefs, a better sense of meaning, and a whole new broad perception of reality.

Research confirms the claim that positive effects are not restricted by the content of a situation, but rather emerge as a result of the acute experience of powerlessness. For example, all of these studies have reported the positive effects of trauma:

- bereavement (Calhoun and Tedeschi 1989–90; Schwartzberg and Janoof-Bulman 1991);
- burn patients (Andreasen and Norris 1972);
- cancer patients (Collins, Taylor and Skokan 1990; Taylor 1983);
- childhood sexual abuse survivors (McMillen, Zuravin and Rideout 1995);
- heart-attack patients (Affleck, Tennen and Croog 1987);
- Holocaust survivors (Kanhana 1992);
- parents of ill and high-risk children (Affleck, Allen, Tennen, Mcgrade and Ratzan 1985);
- participants in combat (Elder and Clip 1989; Sledge, Boydstun and Rabe 1980);
- persons infected with HIV (Schwartzberg 1993);
- rape victims (Burt and Katz 1987; Veronen and Kilpatrick 1983);
- survivors of a ship sinking (Joseph, Williams and Yule 1993);
- survivors of lightning strikes (Dollinger 1986);
- victims of disasters (Thompson 1985);
- victims of incest (Silver, Boon and Stones 1983).

Furthermore, while research has proven that the degree of trauma pathology is positively correlated with the severity of the traumatic event or situation, the same is true regarding the degree of post traumatic growth (Aldwin, Levinson and Spiro 1994; Elder and Clip 1989; Joseph et al 1993; Sledge et al 1980).

1.4.2 The Evolutionary and Biological Basis of Post-traumatic Growth and Post-traumatic Stress Disorder

From an evolutionary point of view, Eberly, Harkness and Engdahl (1991) discuss hyper-vigilance, cognitive re-simulation and emotional dissociation, the hallmark behaviours of PTSD (and common features of other psychopathologies), and confirm that they result from extreme threats and, under some socio-cultural situations, can turn out to be pathological. These behaviours can also underpin what Tedeschi, Park and Calhoun (1996, 1998) call post-traumatic growth (PTG). Eberly et al (1991) report that hyper-vigilance aids the person in avoiding future dangers related to those previously experienced – anxiety related to a traumatic event is triggered by similar stimuli. Re-simulation, or the cognitive repetition of the situation, allows the individual to learn from the traumatic situation and build up alternative reactions if or when a similar threat takes place again. Emotional dissociation allows the trauma survivor to disconnect emotional reactions from cognitive scenarios and illuminate discontinuity between the high- and low-road fear responses in order to avoid making similar mistakes and to handle information through new behaviours and in new ways.

There is no detailed or specific research that specifically addresses the biology of post-traumatic growth. However, if the theories of Pitman et al (2000) and McFarlane et al (2002) are incorporated then PTSD can be explained by an evolutionary framework, because the researchers offer a neural/endocrine foundation for comprehending and accepting the occurrence of post-traumatic growth. Pitman et al. (2000) argue that trauma is an outcome from an exaggerated and/or extreme reaction of neuropeptides and catecholamines to a threatening event. Significant build-up of these hormones strengthens traumatic memory, causing anxiety that forces the traumatized survivor to produce meaning. It is known from research that the catecholamines,

particularly epinephrine, play a vital part in increasing memory consolidation (Cahil and Weber 1994; Cahill, Prins, Weber and MacGaugh 1994; Golier and Yehuda 2002), and that adrenal steroids, such as cortisol, change the effects of adrenaline.

As an example, removal of the adrenal glands from rats (eliminating the production of adrenal steroids) makes them more susceptible to the memory-enhancing effects of adrenaline, while inoculations of glucocorticoids in the same rats decrease the memory-enhancing effects of adrenaline (De Wied 1984; Yehuda 2000). In humans, this memory is then linked with the emotional reactions of distress that are activated by the hypothalamic pituitary adrenal axis (HPA axis). Any form of reminder of the distressing event activates the stress symptom. The outcome is the release of the corticotrophin releasing factor (CRF) as an outcome of memory-induced anxiety. The hyper-secretion of CRF activates pituitary release of cortisol. In the beginning, the HPA axis is set off by features of the traumatic memory, and each time the memories of the distressful event are reactivated it is linked with new memories which are over-consolidated, resulting in the person processing one traumatic situation after another.

McFarlane (2002) examines similar phenomenon at the level of neural networks and reports that PTSD has to be explained and clarified in terms of three processes: (1) iterative learning; (2) pruning of neural connections; and (3) top-down activation. In iterative learning, 'neural networks are altered by their internal structure during the integration of novel information'. In pruning, 'neural connections die as a result of competition between neurons for connections'. In top-down activation, the 'dominant inflexible net works prime or bias brain activity toward stimuli relevant to certain memories' (Christopher 1999). In an ethnographic research study where individuals were acknowledging a radical change of world view, it was discovered that there was an association between stress or trauma (in the form of profound

experiences of powerlessness) and a desire for more holistic approaches of thought and more socio-centric formation of self (Christopher 1999). From an evolutionary psychology point of view, this type of trauma reaction not only connects biological and clinical research but also provides immense clarity to the work of sociologists, philosophers and intellectual historians.

Several researchers have suggested that these experiences are imperative for the appearance of new cultural paradigms, which ‘defend systems of political economy by defining the boundaries between the objective and the subjective, the natural and the unnatural, and the moral and the immoral, as well as the enlightened and the pathological’ (Beck 1992, 1995; Christopher 1999; Fox 1990; Giddens 1990; Murphy 1994; Toulmin 1990). This notion that the experience of powerlessness plays a vital part in the formation or alteration of the cognitive representation of a world view is reinforced by three research findings in psychology. Research has reported that intrusive and/or disturbing thoughts are the direct consequences of trauma (Joseph, Yule and Williams 1995; McFarlane 1992), and that PTG is positively correlated with enhanced reflection when the reflection is not dominated by negative, ‘self-punitive’ thoughts (Calhoun et al 2000). Furthermore, the more severe the trauma is, the stronger the association between PTG and reflection (Fontana and Rosenheck 1998). However, when PTG is obstructed by negative self-punitive reflection or other dysfunctions, pathologies such as PTSD or depression are prone to increase or develop. This evidently suggests how culturally mutual cognitive schema assigning shame, and individual personality schema featuring guilt, can increase the process of PTG and cause pathology (Castillo 1997). McFarlane et al (2002) report that PTSD builds up when emotional neural networks take control and cognitive networks are unable to stabilize. The severity of trauma is positively correlated to both pathology and PTG which entails that the normal reactions to trauma and the uncommon pathological reactions both

appear from the same evolutionarily inherited response, reaction, or symptom to trauma. The fact that PTG is linked with reflection only when the reflection is not dominated by self-punitive thoughts suggests that the connection is not a simple biologically internal development, but a bio-psycho-socio-cultural development. Accordingly, what makes a memory traumatic is the iterative replaying of the event and the subsequent cognitive and affective associations that form, thereby giving the event life-changing meaning in an ongoing way. Moreover, those who show the highest levels of PTG appear to be subjects who progress past the attribution of personal causality to take on a more conceptual critique of the cultural ideals of the self, society and nature (Christopher 1999).

1.5 Concluding Remarks

Kulka et al (1990) have stated that PTSD symptoms are more likely to lead to decreased job satisfaction, work absence and early retirement, depending upon the kind of trauma exposure – either directly as a victim or indirectly as a helper (PTSD has been indicated as a primary or secondary traumatic stress disorder respectively for these cases). Contrary to primary stress symptoms and reactions, which are mainly associated with the experience of primary traumatic stress as a victim, secondary stress is described as ‘the natural consequent behaviours and emotions resulting from knowing about a traumatizing event experienced by a significant other – the stress resulting from helping or wanting to help a traumatized or suffering person’ (Figley 1995).

Epidemiological studies (Kulka et al 1990) of trauma and post-traumatic stress disorder using different populations found current prevalence rates for PTSD of 12% for sexual assault and 13% for rape. Prevalence rates for Vietnam combat veterans were shown to be 15%. The past few decades have witnessed a growing interest in research on secondary traumatization and

of occupational stress among emergency services personnel. McFarlane (1987) established occurrence rates of 32%, 27% and 30% in a sample of fire-fighters four, eleven and twenty-nine months after an Australian bushfire. Nearly 20% of these fire-fighters had supposed the situation as life-threatening, 41% had to protect themselves from the fire, 23% suffered from property damage and 25% were injured . It can be seen that the fire-fighters in this research were personally affected by trauma exposure – in other words, they were mostly victims, not only helpers. Furthermore, this group also displayed a high risk of PTSD, due mostly to the bushfire mission and less to helping other individuals in the emergency.

Investigations concerning the effects of disasters have mostly focused on the immediate victim of the traumatic event (Hodgkinson and Stewart 1991), particularly on primary traumatic stress disorder. Few studies (Ersland et al 1989) in the past several decades have examined the psychological aspects of secondary traumatic stress and individual work in emergency settings. Ersland et al (1989) reported that 24% of rescue workers who experienced an oil rig disaster displayed post-traumatic stress reactions nine months after the disaster. Prevalence rates of PTSD in rescue workers have been estimated in the range of 3% to 7%. Overall, very little attention has been paid to research and population studies amongst high-risk groups such as fire-fighters and emergency workers.

The present researcher has focused on a sample of doctors and nurses working in Accident and Emergency units, ambulance technicians, social workers, psychologists, psychiatrists and counsellors. These groups are repeatedly exposed to secondary traumatic stress that qualifies as trauma beyond normal human experience. Furthermore, this research aims to identify symptoms of secondary traumatic stress and how these symptoms may play a role in the professionals' employment, health and well-being.

As noted earlier, there has been an extreme lack of attention paid to care providers who are in close contact with victims and trauma survivors on a daily basis (Catherall 1995). Hence, it is vital to consider and investigate the mental health and well-being of this high-risk group of professionals and their ability to cope with constant and various exposures to traumatic material – secondary traumatic stress disorder. Saakvitne et al (2000) have suggested that the physical and mental health well-being of professional carers is very important in safeguarding victims and survivors of traumatic events.

Overall and in the past few decades, research has directed some attention towards secondary traumatic stress (the focus of the next section of the literature review) and related symptoms (Figley 1995). The symptoms of secondary traumatic stress are nearly identical to those of PTSD – a detailed review follows in Chapter 2.

Chapter Two

Literature Review: Part II

2.0 Secondary Traumatic Stress, Compassion Fatigue and Burnout: A Systematic

Overview of Meta-Analysis Studies

A selective review of the literature will address studies on compassion fatigue (CF), compassion satisfaction (CS), and burnout (BRN) with a focus on several studies that address the relationship between them. A significant body of research (Aiken et al 2002; Janssen et al. 1999) has documented the prevalence of BRN among nurses and among mental health professionals including social workers, psychologists, case managers and occupational therapists (Acker 2011; Lasalvia et al 2009). There is a limited amount of literature focusing on CF and even less literature that focuses on CS.

Haley (1974) and Figley (1995) were among the first pioneer workers who discussed the notion of secondary traumatic stress through their work on adjustment of repatriated and returned Vietnam veterans. Figley (1995) suggested that professionals and family members could be at risk of developing traumatic stress from those whom they care for. Courtois (1988) noted that secondary traumatic stress develops through frequent contact with a range of survivors and victims where the therapist might experience reactions of PTSD as a result. The field of trauma (Figley 1995) started to explain the effects of working with traumatized patients on mental health professionals. Therefore, secondary traumatic stress can be regarded as a contributory form of PTSD that takes place following vicarious exposure to a sudden, life endangering traumatic events including rape, childhood sexual abuse and severe threats to the psychological integrity of the patient (Figley 1995). Figley (1995) wrote that the elementary distinction between PTSD and

secondary traumatic stress is the position of the stressor. If the stressor directly harms or threatens the person, it is a primary stressor that will likely result in post-traumatic stress disorder.

Nursing data and studies (Abendroth and Flannery 2006) found that nurses who reported having compassion fatigue felt a difference in the way they performed their work; for instance, they distanced themselves from their patients which also resulted in pessimistic views toward positive change. Abendroth and Flannery (2006) explored the risk of compassion fatigue among hospice nurses as these professionals deal more frequently with patients' deaths than nurses in other specialties. The researchers found that 80% of their study sample was at moderate to high risk for compassion fatigue. Yoder (2010) also studied nurses and described factors that triggered compassion fatigue or burnout; these factors were organized into three categories – caring for patients, system problems and personal issues. The second category of trigger situations, system issues, included heavy patient assignments, high acuity, overtime and extra work days. The sample studied were comprised of 280 Canadian mental health professionals, and included certified clinical counsellors, psychologists, psychiatrists, social workers, and community agency counsellors, who were all identified as trauma therapists. Additionally, the entire sample were known to have past personal histories of trauma and they had all worked for community agencies with high caseloads of traumatized clients and increased levels of compassion fatigue (see Buchanan et al 2006).

Several studies looked (Sprang et al 2007; Craig and Sprang 2010) on the relationship between CF, CS and BRN. In determining the association between them amongst mental health professionals, Sprang et al (2007) concluded that female workers were more likely to be prone to experiencing compassion fatigue and that specialized training in trauma generally increased

levels of compassion satisfaction. The researchers also reported an association between the three variables and location. In comparison to mental health workers in more urban areas, rural mental health workers had the highest likelihood of experiencing and reporting burnout. Craig and Sprang (2010) also explored the impact of using evidence-based practices on compassion fatigue, burnout and compassion satisfaction in a random, national sample of self-identified trauma specialists. Younger professionals were reported higher levels of burnout and more experienced providers endorsed higher levels of compassion satisfaction. The evidence-based practices showed decreases in compassion fatigue and burnout and increases in compassion satisfaction. Similarly, Alkema et al (2008) studied how self-care, CF, BRN and CS were linked in healthcare professionals from a variety of disciplines working in home and hospice environments. Self-care practices seems to aid those in the caring professions hence find satisfaction and rewards in their work ; and overall appeared to protect workers from BRN and CF, and promoted CS.

Murray et al (2009) also studied the associations between STS and BRN, CF and CS among nurses who cared mostly for trauma patients. Three factors were shown to be predictive of BRN and CF in nursing. And these include more hours/shifts work, medicinal use and less established relationships with co-workers. On the other hand experience in trauma nursing, education and age were shown have no correlation with burnout or compassion fatigue. Also secondary traumatic stress, burnout and compassion fatigue were not found in participants with compassion satisfaction. Factors that appeared to be predictive of compassion satisfaction included having education level, meditation practices and stronger social support and ties to co-workers. Nurses with compassion satisfaction were overall not affected by secondary traumatic stress, burnout, or compassion fatigue. Murray et al (2009) further reported potential links in

social support can both alleviating work stress-related conditions and promoting compassion satisfaction for nurses who interact substantially with trauma patients. Based on a study by Collins and Long (2003), it was suggested that compassion fatigue and burnout were not likely to appear in healthcare professionals of a trauma and recovery team demonstrating higher levels of compassion satisfaction.

Bober and Regehr (2006) have paid great attention to job-related stress and suggest that patterns of good practices within organizational constituents are work life balance, education, social support and attractive and enhanced work environment. Lee and Ashforth's (1996) meta-analysis study on burnout shows that manager/director and co-worker support and peer-team consistency are linked to lower levels of burnout. Also (Hall 2004) found that clinical nurses link their work life stressors with pleasing and meeting the patients' needs, self-expectations, workload and co-workers' inexperience. Furthermore, De Carvalho et al (2005) also found related patterns among oncology nurses in Brazil; the nurses reported five main stressors such as watching the patients suffering and being incapable to help, workload, lack or the ability to obtain medical tools, lack of contribution and exertion from leadership in risk situations, and errors made by the nurses themselves. Lasalvia et al (2009) researched job related burnout in community-based psychiatric services. Burnout was mostly caused by high levels of face to face interaction with patients and clients, longer years of working within mental healthcare, unsupportive team-work/supervision and alleged unfairness. Aiken et al (2002); Janssen et al (1999) found high levels of emotional exhaustion and greater job dissatisfaction in nurses associates with job expectations, high levels of patient-care workloads and weak social support. In addition, Laschinger et al (2009) suggested that the most vital forecasters of work life dissatisfaction and low promise/commitment in nurses where they have the desire to leave the

profession included lack of supervision, emotional fatigue and pessimism. Leiter and Maslach (2004) further examined the above indicated reporting and relationships among the six areas of work life and burnout using data from several databases (N = 6,815). The six areas of work life were all reported to be highly associated to burnout. But workload, justice and control were highly associated to emotional fatigue. Cynicism had the highest association with fairness and values. Lastly, personal effectiveness had the solidest association with control and values. Maslach and Leiter's (2008) longitudinal research also reported that scores on the six areas of work life can aid as early forecasters of burnout. Within the nursing literature, several studies (Cho et al 2006; Greco et al 2006) have showed associations between person-job match and burnout in newly graduated nurses, experienced clinical/acute nurses (Laschinger and Finegan 2005; Leiter and Maslach 2009, Greco et al 2006). Killian (2008) studied twenty social workers, psychologists, professional counsellors, and marriage therapists and found various risk factors in experiencing work-related stress and compassion fatigue. The research reported that greatest reasons for such risk factor to occur were demands and high caseload work, work-holism, personal history of trauma, irregular contact to supervision, lack of a supportive work environment, lack of a supportive social network, social isolation and cynicism. Additionally, the level of reported social support from friends, family and community was the most significant forecaster of Compassion Satisfaction; working long hours per week with traumatized clients/patient decreased Compassion Satisfaction, however, having good control, supervision and team efficacy at the workplace was linked with higher levels of Compassion Satisfaction. As mentioned above, it can be noticed that work fatigue, professionals' sense of helplessness or hopelessness regarding other social welfare or judicial systems that they are failing their patients; emotional self-awareness and therapists' history of traumas were the strongest reasons for

experiencing compassion fatigue. Generally, these reports show that work life patterns play a vital role in both compassion fatigue and compassion satisfaction.

Compassion satisfaction can improve the harmful reactions of compassion fatigue and burnout and work life dissatisfaction. In a study (Simon et al 2006) identifying compassion fatigue and included oncology social workers; compassion satisfaction was reported to be inversely linked with compassion fatigue and burnout. A higher association was identified between compassion satisfaction and burnout than in comparison to compassion fatigue/secondary traumatic stress. As burnout heightened, job satisfaction levels reduced. In addition, a moderate association was identified between burnout and compassion fatigue/secondary traumatic stress, therefore, reporting that professionals with CF/STS are at higher risk of experiencing burnout and job dissatisfaction. Devilly et al (2009) identified that stressors instigated by work environment were better indicators of compassion fatigue and burnout for mental health workers. In summary, there is a great amount of research that has focused on professionals' burnout, compassion fatigue and compassion satisfaction, however, further in depth research is needed to analyze the relationship between CS, CF and BRN in healthcare environments. Those who have studied compassion fatigue mostly hypothesize that job satisfaction will lessen the work-stress and aid in preventing compassion fatigue and burnout.

Based on reviewed literature above, it seems that controlling compassion fatigue could aid in reducing burnout and job dissatisfaction. For instance, in healthcare settings, the negative factors of compassion fatigue like boredom, loss of compassion, anxiety and discouragement could be decreased if supervisors encourage work settings that increase the match between an individual's prospects and the six areas of life and certainly improve work commitment. Even though the literature has covered research on professionals from various settings such as social

workers, therapists and mental health workers, the nursing discipline seems to be the most researched and frequently discussed among researchers. To sum up, research is compulsory to additionally discover the relationship between CS, CF BRN and the six areas of job satisfaction among frontline mental health professionals.

It is worth noting that cross-national studies and research (Poghosyan et al 2009; Soler et al 2008) also suggested that health professionals from different countries doing the same job may vary in job burnout. For instance, Japanese nurses indicated decreased levels of personal achievement and increased levels of emotional exhaustion and depersonalization in comparison to nurses from the United States, Canada and the United Kingdom, Germany and New Zealand, whilst, Russian and Armenian nurses reported the lowest levels of job burnout (Poghosyan et al 2009). A European study (Soler et al 2008) reported that the highest percentages of family doctors with job burnout were found in the United Kingdom, Italy and Greece. Professionals from Fiji or Brazil may undergo from higher levels of job burnout than professionals in Israel, France, Germany or China (Perrewé et al 2002). Thoresen et al (2009) suggested that culture is a critical matter to take into account when studying job burnout, compassion fatigue, secondary traumatic stress and compassion satisfaction. The socio-cultural (Bracken 2001; Marshall and Suh 2003) background may control for the results of trauma exposure in various ways including the levels of emotional experiences and emotional processing. Additionally, critical causes or factors of developing the risks of secondary traumatic stress might include existing policies, social resources and organizational appearances which are likely to differ across countries (Voss Horrell et al 2011).

Gender has also been also been taken into account as a vital factor when studying the symptoms of secondary traumatic stress. Female health professionals indicated increased levels

of burnout or increased levels of compassion fatigue (Robertson 2011, Sprang et al 2007). The relationship between gender and post traumatic stress disorder symptoms among health professionals with secondary exposure are unclear (Sprang et al 2011). Moreover, the effects of gender role on burnout may be higher in the United States than in European countries, where there are smaller reported differences in burnout levels among men and women (Purvanova and Muros 2010). However, it is still unidentified if gender may moderate the relationships between job burnout and secondary traumatic stress. In addition, some jobs are categorized by low probability of direct exposure work related trauma, for instances therapists, in contrast, to health professionals such as paramedics or rescue workers and therefore may also be directly exposed (Argentero and Setti 2011). Being a health care professional that may have an increased likelihood of both direct and indirect exposure to work-related trauma may be an imperative element of secondary trauma and burnout. (Palm, Polusny and Follette 2004).

The most comprehensive meta-analysis study that concentrated on the secondary traumatic stress was conducted by Palm, Polusny and Follette 2004) in which a great and in-depth meta-analysis of secondary traumatic stress and its associated symptoms was carried out. The researchers assembled samples, procedures and measurements that applied in 41 original studies. Overall, data from 8,256 health professionals were analyzed. Sample sizes varied from 13 to 961 participants, with an average of 198.63 (SD= 205.48) and median of 129. The average sample consisted of 59.03% women (SD= 28.35), with a majority of studies (82.93%; n= 34) targeting mixed-gender samples. Only two studies were homogeneous in terms of gender (100% male participants; 100% female participants). Gender frequencies were missing in five studies. Data were collected from various professional groups and included:

- therapists, mental health professionals (including social workers), and counsellors (36.58%; n= 15);

- emergency, ambulance, or rescue workers (12.20%; n= 5);
- child care workers and child healthcare providers (9.76%; n= 4);
- nurses (7.32%; n= 3);
- forensic specialists (4.88%; n= 2);
- chaplains (4.88%; n= 2);
- other non-categorized professionals (24.39%; n= 10).

Almost half (46.34%; n= 19) of the original study was carried out in the United States; 22 studies (53.66%) took place in North America. Four studies (9.76%) were led in Israel, three in Italy (7.32%), two in Australia (4.88%) and two in the Netherlands (4.88%). There were also two multi-country studies (4.88%) carried out both in Canada and the United States. Three studies (7.32%) took place in Africa or Asia.

An English-language version of the questionnaires was applied in 65.85% (n= 27) of the studies. The measures utilized to explore secondary traumatic stress originate from the compassion fatigue framework (Figley and Stamm 1996). These Pro-QOL-related measures were utilized in 65.85% of studies (n= 27) and among 5,343 participants (64.72% of the total sample). The most popular questionnaires utilized to study job burnout also originate from the compassion fatigue method to job burnout (i.e. Pro-QOL-related measures). They were utilized in 60.98% of studies (n= 25), with 5,409 (65.51% of the total sample) healthcare professionals completing the respective and relevant measures. Overall, Pro-QOL was utilized in 34.15% of studies (n= 14) to assess both STS and burnout constructs.

The meta-analysis outcomes from 41 original studies also reported that the typical relationship between such variables was positive and the effect size was great (weighted $r^2 \wedge .69$). The coefficient of determination ($r^2 \wedge$) was .48. The analysis of the fail-safe N showed that 10,603 studies with null results were required to create a non-significant association between secondary traumatic stress and job burnout. The following studies tested the moderating role of the measurement, the theoretical framework, the country, the continent, the language of data

collection, gender of professionals taking part in the studies, and the type of occupation (likely to be directly and indirectly exposed at work compared to those who are likely to be only indirectly exposed at work).

The original studies were divided into two groups on the basis of the type of measurement utilized to explore STS: (a) PTSD-like symptoms or (b) a measurement mentioning compassion fatigue, based on a comprehensive conceptualization of secondary traumatic stress introduced by Figley and colleagues (Adams et al 2008; Figley and Stamm 1996). The outcomes of the moderator analysis indicated that the effect sizes of the association between STS and job burnout were dependent on the type of STS assessment, with Pro-QOL-related measures having a stronger association ($r^2 = .53$) than measures assessing PTSD-like symptoms ($r^2 = .37$).

The original studies were separated into two groups on the basis of the type of job burnout assessment utilized in the studies: (a) the measures stressing the role of exhaustion and (b) the subscales of Pro-QOL and related measures, based on a broader burnout notion introduced by Figley and his co-workers (Figley and Stamm 1996). The results indicated that the relationship between secondary traumatic stress and job burnout was moderated by the type of job burnout measurement, with Pro-QOL-related measures generating significantly stronger associations

($r^2 = .55$) than any other measures of burnout ($r^2 = .28 - .53$).

Moreover, the meta-analysis study explored the association between secondary traumatic stress and three components of job burnout measured with the Maslach Burnout Inventory (MBI): and these involved emotional exhaustion, depersonalization or cynicism, and lack of professional or personal accomplishments (Maslach et al 2001). The outcomes indicated that the effect size of the relationship between STS and a lack of achievement was comparatively smaller than the other two effect sizes. In particular, the correlation of STS with emotional exhaustion

(weighted $r = .55$, $r^2 = .30$, $N = 2,361$) was stronger than the associations with depersonalization ($r = .51$, $r^2 = .26$, $N = 1,939$, $p = .001$) or lack of accomplishment, weighted ($r = .35$, $r^2 = .12$, $N = 2,158$, $p = .001$)

Figley and Stamm (1996); Stamm (2000) also investigated whether the relationship between secondary trauma stress and job burnout varied depending on the procedure of compassion fatigue framework. In particular, connections achieved in studies in which both secondary traumatic stress and job burnout were operationalized in line with the compassion fatigue framework (with Pro-QOL or Pro-QOL-related measures applied) were compared to the relationships identified in studies in which STS and job burnout were operationalized in line with other approaches. The outcomes of the moderator analysis reported that the relationship between STS and job burnout was weakened by the type of theoretical framework. For STS, job burnout associations were significantly stronger when both concepts were explored with the Pro-QOL or Pro-QOL-related measures ($r^2 = .55$) compared to the relationships discovered in studies using measures derived from other approaches ($r^2 = .34$).

Other main identification was that that cultural and language factors moderated the link between STS and job burnout. The relationships identified for data allocated in the United States were significantly stronger ($r^2 = .52$) in comparison to the associations identified in the studies from other countries ($r^2 = .45$). Correspondingly, major differences were established when the connections identified in North America were compared to the outcomes obtained on other continents ($r^2 = .49$ and $r^2 = .48$). Furthermore, the links identified for the English-language versions of assessments were significantly stronger ($r^2 = .50$) than the associations identified in the studies utilizing other language versions ($r^2 = .44$). Furthermore, the outcomes showed that gender may moderate the association between STS and job burnout, with stronger relationships identified in mainly female samples ($r^2 = .48$) in comparison to mainly male samples ($r^2 = .37$).

Considering gender differences in associations between STS and job burnout, (Olf et al 2007) suggested diverse mechanisms of developing risks of traumatic stress among men and women including differences in experiencing the depletion of emotional reserves.

Further outcomes achieved in the original studies which included professions with increased likelihood for both direct and indirect trauma exposure were compared to professionals in which only indirect trauma exposure was likely to take place. The outcomes showed that type of profession moderated the association/relationship between STS and job burnout. The relationships were stronger in professionals only exposed to secondary exposure ($r^2 = .52$) compared to professionals exposed for both primary and secondary exposure ($r^2 = .44$).

The meta-analysis explored the association between STS and job burnout in different healthcare workers who are exposed to indirect traumatic material. The indirect exposure occurred in professionals because of the contact with patients who had been through traumatic situations or because of exposure to other traumatic materials. High levels of burnout and other risks of indirect traumatic exposure are likely to be raised among mental healthcare professionals (Newell and MacNeil 2011) and to affect professionals' well-being, the quality of life of their patients, and the efficiency of caring (Cheung and Chow 2011). The meta-analysis of 41 studies indicates that the relationship between STS and BRN among healthcare providers is high and that these two elements might share as much as 48% of the variance.

Voss Horrell et al (2011) have suggested that compassion fatigue, burnout, vicarious trauma and secondary traumatic stress establish a similar group of psycho-social of secondary exposure. Further, Luszczynska, Benight, & Cieslak (2009) have indicated that the properties of indirect exposure might be moderated by cultural and individual resilience concepts like toughness or self-effectiveness. The meta-analysis study also indicates the importance for further

research in secondary traumatic stress as additional explanation are imperative to describe the common and specific risk and resilience constructs and to clarify the progress of compassion fatigue, burnout, vicarious trauma and secondary traumatic stress among healthcare various professionals.

Figley and Stamm (1996) have suggested that using assessments from the same approach such as compassion fatigue can be reflected as a superior approach in assessment of secondary traumatic stress and burnout associations compared to joining measurement approaches from distinct frameworks. On the other hand, the outcomes of the meta-analysis study indicate that the request of the compassion fatigue approach to assessing risks of secondary traumatic stress exposure in healthcare professionals has certain undesirable consequences. The outcomes moderator analysis shows that if both STS and job burnout are assessed within the compassion fatigue approach (i.e. by means of Pro-QOL and Pro-QOL-related measures), the proportion of shared variance is significantly larger than if the assessments are derived from any of the other methods. It was indicated that though both STS and burnout assessments are derived from the compassion fatigue framework, the estimated overlap is 55%, which suggests that STS and burnout concepts might be indistinguishable.

Overall, the results of the meta-analysis study do not provide a review of all matters of STS and burnout theories. However, it highlights the main concepts in STS and burnout frameworks. Therefore, the conclusions are limited to operationalization of the STS and burnout concepts but not the entire theories. Outcomes of the meta-analysis also offered discussions for a limited practical efficacy of using Pro-QOL and Pro-QOL-related measures when testing for STS and job burnout in one study. The outcomes show that utilizing frameworks and assessments that differ from compassion fatigue (i.e. PTSD-like symptoms, vicarious trauma or job burnout

explaining as the focusing on emotional exhaustion consequences of work-related stress) would result in secondary traumatic stress and burnout sharing 34% of variance. In this case, burnout and STS would be associated, but assessed as separate concepts. This conclusion is in line with earlier research and narrative reviews of literature (Jenkins and Baird 2002; Sabo 2011; Thomas and Wilson 2004).

The above findings have indicated a significantly larger overlap between STS and job burnout across countries. The differences may be an outcome from the fact that the translation procedures permits for taking more distinct facets of STS and job burnout. Consequently, the translation from English to Hebrew, Dutch or German can permit for developing refined versions of original approaches. Additional investigations need to examine the resemblances across the language versions in terms of criterion validity and factorial structure. Bracken (2001); Marshall and Suh (2003) stated that the other source of between-country differences can be an outcome from cultural differences in shaping emotional experiences and emotional processing or dissimilarities in organizational appearances, health inequalities, or policies postulating work settings. Regardless of possible sources of the observed differences, the findings are in line with the assumption that culture is among the key contexts differentiating the effects of secondary exposure among professionals across countries (Marshall and Suh 2003).

Outcomes showing weaker relationships between STS and burnout in healthcare professionals who are disposed to be directly and indirectly work-related trauma exposure, in comparison to professions that are only disposed to indirect work-related trauma, were in line with arguments stated by Palm et al. (2004), the researcher stated that professionals exposed to direct work-related trauma may be resilient because they are more prepared and have undergone

training. Hence, even if such professionals suffer from work stress such as burnout, they may not report/indicate secondary traumatic stress symptoms.

Other confounding factors such as personal history of trauma exposure and other patient features were not controlled. Cultural background referred only to the country of the study and language utilized in gathering the data. Furthermore, the outcomes should not be generalized to other definitions or frameworks discussing the concerns of secondary work-related trauma exposure beyond the ones chosen for this review. Finally, the majority of these studies included in the meta-analysis were cross-sectional and therefore no causal associations between STS and job burnout could be investigated.

Previously when examining/observing the treatment of post traumatic stress disorder, meta-analyses proposed comparable efficacy of cognitive behavioural treatments on various trauma based treatments/therapies, but findings for other treatments are incoherent. One meta-analysis did not establish differences for bona fide treatments/therapies, but was criticized for overgeneralization and a biased study sample and relied on an omnibus test of general effect size heterogeneity that is not extensively utilized. Tran and Gregor (2016) presented an updated meta-analysis on bona fide psychotherapies for post traumatic stress disorder, contrasting an improved application of the omnibus test of overall effect size heterogeneity with conventional random-effects meta-analyses of specified treatment types against all others. Twenty-two studies were eligible, reporting 24 head-to-head comparisons in randomized controlled trials of 1694 patients. Comparisons between trauma focused and non-trauma focused treatments indicated a small advantage for trauma focused treatments at post-treatment (Hedges' $g = 0.14$) and at two follow-ups ($g = 0.17$, $g = 0.23$) concerning post traumatic stress disorder symptom severity. Controlling and regulating for significant studies and publication bias, long-lasting exposure and exposure

therapies ($g = 0.19$) were slightly more effective than other therapies concerning post traumatic stress disorder symptom severity at post-treatment; long-lasting exposure had also higher improvement rates ($RR = 1.26$). Present-centered therapies were somewhat less effective about symptom severity at post-treatment ($g = -0.20$) and at follow-up ($g = -0.17$), but equally effective as available comparison treatments with regards to secondary outcomes. The improved collection test confirmed overall effect size heterogeneity. Trauma focused treatments, long-lasting exposure and exposure therapies were considerably more effective than other therapies in the treatment of post traumatic stress disorder. Nevertheless, treatment differences were at most small and far below anticipated thresholds of clinically meaningful differences. Previous null findings may have stemmed from not clearly differentiating primary and secondary outcomes, but also from a specific use of the collection test of overall effect size heterogeneity that appears to be prone to error. However, more high-quality studies using ITT analyses are still needed to draw firm conclusions. Moreover, the post traumatic stress disorder treatment field may need to move beyond a focus primarily on efficacy so as to address other important issues such as public health issues and the requirements of highly vulnerable populations.

2.2 Concepts and Main Definitions of Secondary Traumatic Stress Symptoms

The term secondary traumatic stress is utilized throughout the literature and interchangeably with other terms such as vicarious traumatization (VT), counter-transference (CT), compassion fatigue (CF) and burnout (BRN). All of these terms are used interchangeably – the debate is not whether secondary trauma is present but what to call it. As part of this process, it is important to consider these other terms and from the relationship they have to secondary traumatic stress.

The notion of vicarious trauma was first initiated by McCann and Pearlman (1990), and aimed to understand the effects of trauma work on therapists. Vicarious trauma refers to harmful

changes that take place in a professional's view of themselves, others and the world as an outcome of exposure to the traumatic material of patients (see McCann & Pearlman 1990). Pearlman and Saakvitne (1995a: 31) describe vicarious trauma as 'the cumulative effect of working with survivors of traumatic life events and anyone who engages empathetically with victims or survivors is vulnerable'. This is similar to Figley's (1995) description of secondary traumatic stress. Even though Pearlman and Saakvitne (1995b) adapt the concept of VT in secondary traumatic stress, they state that the phenomenon can be experienced by any professional who works empathetically with victims and survivors such as fire-fighters, police, criminal defence lawyers, medical personnel, battered women and homeless shelter staff, sexual assault workers, suicide hotline staff, prison personnel and trauma researchers. Included in the definition of VT are disturbances in the therapist's cognitive frame of reference. McCann and Pearlman (1990) have suggested that the changes that take place in the therapist's cognitive schema of themselves, others and the world are persistent, increasing and permanent. For example, an individual's belief that they can safely use public transportation at night or that the world is an orderly place might be challenged by the traumatic material relayed to the therapist. While secondary traumatic stress and VT are frequently utilized interchangeably, VT highlights cognitive schemas (how one views the world, oneself and others) as an outcome of exposure to patient's traumatic material. Secondary traumatic stress refers to a set of psychological reactions that mimics PTSD and can also be an outcome of exposure to a patient's traumatic material.

According to Jackson (1999), VT is the outcome of the cumulative effect of traumatic material and is considered as a predictable effect of dealing or working with traumatized victims and/or survivors. Judith Herman (1992) added that 'trauma is contagious'. Vicarious traumatization is considered as an outcome of 'the interaction of the clinician's personal

characteristics ... along with the material presented by the client' (Cunningham 2004: 452; Pearlman and Saakvitne 1995a). Greater risk to professionals is linked with higher levels of exposure to traumatic material (Cunningham , 2004) and to a personal history of trauma by the therapists (Jackson 1999). Numerous research projects have noted that the effects of VT are lower in therapists with more experience in working with trauma than among professionals new to the field (Cunningham 2004; Jackson 199). A higher level of education among clinicians is also associated with fewer symptoms of VT (Baird and Jenkins 2003).

The effects of VT mostly include disruptions to the clinician's own cognitive schema, especially in the areas of safety, esteem, trust, intimacy and control, both in regard to themselves and to others (Baird and Jenkins 2003; Cunningham 2004; Jackson 1999). These cognitive changes include 'heightened feelings of vulnerability, an extreme sense of helplessness and/or exaggerated sense of control, chronic bitterness, cynicism and alienation' (Gabriel 2002). Other reactions that are reported include obsession with the traumatic material, emotional numbing, generalized anxiety and listlessness (Dolan 1991), and 'changes in the clinician's sense of self, spirituality, worldview, inter-personal relationships, and behaviour' (Way et al. 2004: 49. See also Chrestman 1999; Freeman-Longo and Blanchard 1998; Kassam-Adams 1999). For mental health professionals working with patients who suffer from PTSD, there is a risk of the former developing symptoms of PTSD themselves (Cunningham and Herman 1992). Furthermore, VT is connected with the negative consequences of continuing and regular exposure to victims, surviving and trauma patients by the professionals including those in a counsellor role. Baird and Jenkins (2003) have reported that STS, VT, CF and BRN have overlapping features and interactional effects on professionals working in trauma settings (see also Way et al 2004).

The literature has suggested numerous ways of reducing the effects of STS, VT, CF and BRN on therapists, such as specialized training to elevate an understanding of the interchangeable terms (Cunningham 2004; Way et al 2004); balancing caseloads that involve patients other than trauma survivors (Dolan 1991); personal therapy (Gabriel 2002); and self-care techniques such as exercise, involvement in recreational activities, journal keeping and spending time with family, friends and children (Gabriel 2002).

2.2.1 Counter-transference

The term counter-transference originates from psychodynamic theory and was proposed by Sigmund Freud. Freud (1910/1957) stated, ‘we have become aware of the counter-transference, which arises in (the physician) as an outcome of the patient’s influence on his unconscious feelings’ (p. 144). Counter-transference is further defined as ‘any projections that distort the way professionals perceive and react to a client’ (Corey, Corey and Callanan 2007). Freud considered counter-transference as the inappropriate response from the therapist to the patient (Corey et al. 2007). Herman (1992) regarded the concept of traumatic counter-transference as similar to secondary traumatic stress. Figley (1995) on the other hand, differentiated counter-transference from secondary traumatic stress in the following manner: he suggested secondary traumatic stress involves but is not limited to counter-transference which takes place within the perspective of psychotherapy and an outcome of responses to the transference on the part of the patient. He further indicated that counter-transference is a negative consequence of therapy and should be avoided. What makes secondary traumatic stress dissimilar from counter-transference is that secondary traumatic stress is frequently a natural outcome of caring, and it is a relationship between two people in which one has gone through a traumatic event and the other is affected by their traumatic material (Figley 1995). Figley et al (2002) further added that ‘counter-

transference is a chronic attachment associated with the family of origin issues and has much less to do with empathy toward the patient that causes trauma' (p. 1436). Secondary traumatic experience includes more traits like changes to the values, beliefs and behaviours of trauma workers. It was also indicated that counter-transference can take place outside the context of exposure to the traumatic material whilst secondary traumatic stress always arises as an outcome of exposure to the patient's traumatic experience.

2.2.2 Compassion Fatigue

Compassion fatigue is another concept that is utilized interchangeably with secondary traumatic stress. Compassion fatigue was first identified by Joinson (1992); it included nurses who were suffering from 'burnout' due to the extended daily rigours of duties in the emergency room. While Figley has suggested in numerous studies that compassion fatigue and secondary traumatic stress may be used interchangeably, he has also reported compassion fatigue as a 'friendly used term' for professionals who suffered from secondary traumatic stress (Figley 1995: 14). He has also indicated that compassion fatigue is the result of regular work with traumatized individuals and empathic orientation by care providers (Figley 1995; Adams et al 2008. White and Gumley (2009) highlighted the difference between secondary traumatic stress and compassion fatigue, and suggested that secondary traumatic stress is the presence of PTSD symptoms, whereas compassion fatigue is classified as an end result of exposure to trauma merged with empathy for patients. Overall, Figley's (1995) view of the role of empathy is important in the conceptualization of both secondary traumatic stress and compassion fatigue.

Professional healthcare providers are expected to care for multiple patients or clients and often witness deaths. Sabo (2006) indicated that emergency nurses suffer from compassion fatigue because of their constant care for traumatized patients who are suffering in pain and

perhaps agony. For example, within the paediatric intensive care unit, a healthcare worker may look after a patient struggling with an infection from third-degree burns at one moment, followed by helping a child abuse victim who shows various signs of severe post-traumatic stress symptoms. As noted earlier, it seems that a consistent, prolonged exposure to traumatized individuals helps the development of secondary traumatic stress reactions among healthcare providers, particularly when there is little or no time to grieve for various traumatized individuals and patients.

Adams et al. (2008) studied a sample of vulnerable care providers for compassion fatigue and found ‘the formal caregiver’s reduced capacity or interest in being empathetic or bearing the suffering of clients and these are the natural consequent behaviours and emotions resulting from knowing about a traumatizing event experienced or suffered by a person’ (p. 103). The nature of psychotherapeutic interferences, including the demand for contact with victims and their family members brings clinicians into a situation where they are repeatedly exposed to and share the thoughts, strong emotions and memories of the traumatic incident, thereby placing them at a high risk for negative psychological consequences (Trippany et al 2004).

Figley and Figley (2006) indicated that professionals repeatedly reported compassion fatigue within their ranks. Many different disciplines were affected:

- chaplains working after 9/11 in New York City (Roberts, Flannelly, Weaver and Figley 2003);
- child protection social workers (Nelson-Gardell and Harris 2003);
- disaster workers (Walsh 2007);
- emergency social workers (Somer et al 2004);
- hospital social workers (Badger et al 2008);

- law enforcement officers (Wee and Myers 2002);
- military combat and community disaster social workers (Jenkins and Baird 2002);
- nurses in hospices (Abendroth 2005);
- nurses in palliative and cancer care (Sabo 2006);
- counsellors and prison guards (Ortlepp and Friedman 2002);
- professionals and volunteers who work with survivors of criminal victimization (Salston and Figley 2003);
- public health nurses dealing with hurricane victims (Frank and Karioth 2006);
- social workers handling victims of World Trade Center terrorism (Adams et al 2008) social workers who worked with a range of trauma patients in Georgia (Bride 2007)
- trauma therapists (Deighton, Gurriss and Traue 2007; Sprang et al 2011).

2.2.3 Burnout

Burnout (BRN) has also been found to overlap with the previously discussed concepts of compassion fatigue and secondary traumatic stress (Baird and Kracen 2006). Baird and Kracen's research has suggested that burnout has been conceptualized as a defensive response to prolonged occupational exposure of demanding interpersonal situations that produce psychological strain (Jenkins and Baird 2002).

Those who have experienced burnout (Valent 2002) may go through some psycho-physiological arousal symptoms; for example, the person may suffer sleep disturbance, aggression, irritability and physical exhaustion. Unlike secondary traumatic stress and compassion fatigue, much of the mental strain from burnout has been found to be organizationally related (administration, supervision, paperwork, details, etc.) rather than

operationally related (dealing with victims, danger, trauma; Brief and Weiss 2002). This particular indication has been supported by the work of George (1995) and George and Brief (1992) who found that enthusiastic leaders could energize their followers, whereas distressed leaders can negatively affect them. There is also noteworthy research indicating that supervision and management play a vital role in the process of dealing with burnout (Azar 2000). Webster and Hackett (1999) investigated burnout among clinical staff members in community mental health agencies and found that it was systematically connected to the leadership behaviour and quality of supervision provided by employees' clinical supervisors. These findings offer support for Cherniss' (1995) argument that supervisors are key in managing burnout because they control instrumental features of the work environment that are primary contributors to the problem. Cherniss (1995) stated that occupational stressors have constituted a significant portion of burnout research, especially as it applies to the mental health status of its workers. Overall, burnout is a chronic reaction to prolonged strain whereas mental strain is an immediate reaction to specific work conditions. Cherniss (1995) utilized a longitudinal research and found that professional self-sufficiency and support are factors that powerfully mitigate and facilitate the recovery from burnout.

Several Studies (Bartz and Maloney 1986; Beaver et al 1986; Constable and Russell 1986; Yasko 1983) suggested that burnout is the outcome of frustration and an inability to achieve work goals and usually originates from either work stressors or management pressures and restrictions. It should be indicated here that burnout has been one of the most widely researched concepts, especially within the nursing arena and healthcare system. Researchers who have looked at buffering factors that may prevent burnout among nurses include Rich and Rich (1987), Topf (1989) and Yasko (1983). Maytum et al (2004) have drawn attention to the

personal self, such as self-care activities, sense of humour, personal philosophy of nursing care, supportive relationships and professional self, time away from work, debriefing, informal work with colleagues, attending in-service training, and developing an awareness of personal triggers and coping strategies that nurses should employ to deal with burnout related symptoms. For example, Demerouti et al (2002) reported that burnout is often developed through a person's appraisal of stressful events, which is mitigated by the individual's perceived self-efficacy in dealing with the stress (Miller and Seltzer 1991). Self-efficacy is concerned with the person's belief; that is his or her ability to organize and carry out an action directed towards a specific goal (Bandura 1997; Friedman 2002). Friedman researched self-efficacy and burnout among teachers and reported that self-efficacy in relation to the teachers' beliefs in their ability to influence social and political forces were strong predictors of burnout (Cherniss 1995; Gallavan and Newman 2013; Leiter 1991).

Overall, institutions might be well advised to devote time to prevention measures and/or development of interventions as a way of caring for staff. From an organizational point of view, administrators and directors could attend to the organization's role in creating and maintaining physical and psychological well-being. Institutions might also explore information and support services, and family friendly policies – examples of measures that might prove helpful in combating conflicting roles of work and family matters (Gallavan and Newman 2013).

2.2.4 Occupational Hazards and Reactions

As noted earlier, secondary traumatic stress (STS) has now been widely reported (Figley 1995). Secondary traumatic stress disorder is frequently examined in the context of an individual dealing with traumatizing material or events but it has also been adapted to explain the motivations of helpers in disasters such as 9/11 or in war zones (Kluft 2004). Furthermore, STS

is applicable to almost all professionals who deal with traumatized individuals, including nurses, police officers, and criminal justice and child abuse social workers (Pearlman and Saakvitne 1995a,b). It can also result from prolonged and cumulative exposure to traumatic material, and has been indicated as an occupational hazard of those working with traumatized individuals (Figley 1999; Munroe et al. 1995). Secondary traumatic stress reaction therefore can often be a predictable part of working with traumatic patient material.

On the other hand, compassion fatigue is a kind of impairment to the professional that arises from interpersonal relationships within the context of the therapeutic alliance and trauma treatment. Figley (2002) pointed out that compassion fatigue may be the result of a lack of care on the professional's part to maintain emotional distance and preserve a self-centred protective mantle. Figley (2002) also indicated that professionals sometimes forget that they are human and that they need different reasonable support from work, colleagues, friends, family, engagement in social activities, and the like, in order to keep healthy and avoid becoming emotionally drained. Personal wellness for a mental health professional is vital to maintain the quality of client care. Lawson (2007) noted a correlation between counsellor wellness and self-care and a positive effect on the ability to provide professional services and hence meet the needs of their clients and patients. Compassion fatigue is not merely a disadvantage to the professional but also to the client and/or the patient who requires utmost support from the care giver.

2.2.5 Figley's Categories

Beaton and Murphy, (1995) and Beaton et al, (1999) have found a positive correlation between secondary traumatic stress responses and large caseloads, reduced longevity of career, long working hours and/or increased contact with traumatized patients. A meta-analysis conducted by Figley (1995) categorized these reactions into three areas:

- Indicators of psychological distress or dysfunction;
- Cognitive shifts;
- Relational disturbances.

2.2.6 Indicators of Psychological Distress or Dysfunction

According to several authors (Clark and Gioro 1998; Harbert and Hunsinger 1991; McCann and Pearlman 1990) indicators of psychological distress or dysfunction include emotions such as sadness and grief, depression, anxiety, fear, rage or shame and can be accompanied by disturbing images and nightmares as well as flashbacks (Figley 1995; Stamm 1997), also, manifestation of numbing (Figley 1995; Herman 1992) and lack of sleep, headaches, or gastrointestinal distress (Figley 1995). Other distressing outcomes include addiction or substance abuse, workaholic patterns and compulsive eating (Dutton and Rubenstein 1995); physiological arousal such as palpitations and hyper-vigilance (Davis 1994) and/or impairment of day-to-day functioning in social and personal lives including missed or cancelled appointments, chronic lateness and feelings of isolation, disaffection and lack of appreciation (Dutton and Rubenstein 1995).

2.2.7 Cognitive Shifts in Beliefs, Expectations and Assumptions

Cognitive shifts are also part of secondary traumatic stress and this includes shifts in the beliefs, expectations and assumptions that professionals working with traumatized victims hold. McCann and Pearlman (1990) have suggested that these cognitive shifts include changes to measurements of dependence or trust to a chronic suspicion of others; safety to a heightened sense of vulnerability; and a very strong sense of helplessness and loss of personal control and freedom. Herman (1992) discussed the consequences of working with traumatized individuals by introducing a concept called 'witness guilt', which may burden trauma workers who have not been directly traumatized. Later studies conducted by Dutton and Rubenstein (1995) provided

evidence that trauma workers feel guilty for taking pleasure in life while they monitor survivors struggling on daily basis. Dutton and Rubinstein (1995) stated that a novice trauma worker can especially experience guilt when the patient relives the trauma through essential interview or therapeutic procedures. Further, Herman (1992) suggested that a type of victim-blaming occasionally took place in trauma workers because they started to feel victimized by their sometimes threatening, manipulative, controlling or oppressive patients. This sort of blame evidently results in disadvantageous and detrimental effects on the therapeutic procedures that clearly affect the trauma worker's performance and relationship with patients or clients.

2.2.8 Relational Disturbances

Relational or relationship disturbances are the result of secondary exposure to trauma, both at personal and professional levels. Studies have indicated that personal relationships can suffer as a result of increased stress or difficulties related to trust and intimacy (Clark and Gioro 1998; White 1998). Other investigations have also revealed that the professional relationship between the trauma worker and the patient can be affected when the worker goes through secondary traumatic stress and responds to the patients with either detachment or over-identification (Dutton and Rubinstein 1995). Detachment or taking emotional distance from trauma survivors can be either a conscious or unconscious process. In either case this may enable the care provider or therapist to manage feelings of vulnerability or of being overwhelmed by the traumatic exposure by blocking out such emotional reactions. This kind of defence mechanism may result in patients feeling emotionally isolated and detached once again, even from those who are meant to help or guide them (Dutton and Rubinstein 1995). The use of detachment or distancing by trauma workers as a secondary response to trauma might also result in withdrawal from family, friends or colleagues (Harbert and Hunsinger 1991). Trauma workers can feel isolated

emotionally in their work environment as they may think that they are the only one who is experiencing trauma due to difficult and painful work (Dutton and Rubinstein 1995).

As noted, trauma workers may sometimes use the process of over-identification with the patient, either consciously or unconsciously, to the extent that they might react with numbness to the patient's traumatic experiences. On the other hand, they may instead take on extreme responsibility for the patient's life and try to achieve control over overwhelming situations. Trauma workers who become overloaded by traumatic matters are at best ineffective and at worst place the survivors in a position of taking care of the care provider. Such a role reversal in care-giving and care-taking has involved patients withholding details about the trauma in order to 'protect' the worker (Dutton and Rubinstein 1995).

Figley (1995) reported that secondary traumatic stress is a natural outcome of caring that occurs between two people, where one person has been traumatized and where the second one is affected by the first person's experiences. These effects are not necessarily an issue but more likely a natural trait of caring for traumatized individuals. Noting the difference between the notions of traumatic counter-transference and secondary traumatic stress is rather complicated. However, an attempt to do this shows that the former relates more to how the care offered by trauma workers is affected by patients and their traumatic material. The latter is more connected to how trauma workers' lives, personal relationships and social networks are affected by the secondary traumatic stress.

Rudolph et al (1997) reported that the psychological consequences of working with traumatized patients occur regardless of race, gender, age or level of training. Currently research (Figley 2003) is growing on how different occupations that involve social support and psychological demands can lead to a history of secondary traumatic stress disorder.

Furthermore, many previous studies have failed to include a comparison (control) group that has not been exposed to traumatized clients (the control group would account for variables such as the counsellor's own trauma experiences and other factors that may increase the vulnerability of a trauma worker to secondary traumatic stress disorder). The consequence of these conceptual and methodological problems has sometimes provided contradictory results and the general finding that most professionals providing support for traumatized clients have little difficulty in coping with the demands of their work (Sain-Farrell and Turpin 2003).

2.2.9 Shared Traumatic Reality and Helper Syndrome

Another term that is noteworthy of mention within the context of secondary traumatization is 'shared trauma' or 'shared traumatic reality' (Baum 2010, 2011; Tosone et al 2015). This refers to events where the professional, helper or first responder is exposed to the same disaster experienced by those they are helping. According to Baum (2011) these situations are characterized by two factors. The first is that the professional and the patient belong to the same suffering population group – except that the professional carer is exposed to both primary trauma (through involvement with the event) and secondary trauma (as they listen to material expressed by the patient). Tosone et al (2011) provided an example of secondary traumatic stress, where they suggested that the terrorist attacks of 9/11 was a shared traumatic event for many of the clinicians involved in the recovery effort. However, it is not always the shared traumatic events that impose the negative symptoms of secondary traumatic stress. The underlying foundation in regards the relationship between the helper and the help seeker has been analyzed for decades (Weiss 1973; Bornstein 1994; Hepworth 1993; Witz 1992). Critical views concerning social intervention and helping relationships generally start by analysing the asymmetrical motives of those providing help/support. The helping professionals get more attention from researchers than

do those who actually seek help (Gergen and Gergen 1986). In order to break this pattern, one must first concentrate on the helping relationship by examining the party requesting the help. Then the roles of helpers will be scrutinised. The issues in helping relationships, generated by irregularity, cannot be resolved by making those interactions symmetrical. The literature discusses numerous examples of inappropriate use of the helping relationship by both the help seekers and the help providers. This does not mean that the existing researcher is intended to downplay or trifle with human suffering. It is almost indecent to question the help obtainable in such emergency situations to a critical analysis, nonetheless, by doing so will hopefully provide further perspectives with the intention of increasing the probabilities of social intervention being effective and safe for parties; the helping professional and the person seeking help. Vroon (1988) describes a 1965 German research which provided very interesting outcomes/findings. It was observed that because patients received the extra attention while they were sick that they had missed in their normal, daily lives, these patients remained sick. "Someone who has succumbed to an ailment is distracted by it from other problems and is moreover the recipient of all forms of attention from his environment" (Vroon 1988). This clarifies why many individuals seeking help choose for a career as patient. Everyone is concerned with the him/her (the sick patient), however they are unable to determine what is wrong. One can meet such patients in doctors' offices. In the world of psycho-therapy, the expression "shoppers" is utilized for individuals who undergo one form of therapy after another. When the patient's demonstrated behaviour is of use; it then generates a great deal of attention and recognition which results in the patient feeling capable of accomplishing outstanding achievement.

So, what motivates the helper? Why do individuals, groups or organizations apply themselves to helping other people, groups or countries? Schmidbauer (1977) discusses the help

given by professional helpers through pathological motives. He refers to the "helper syndrome". Schmidbauer views helping as a resistance against fears and inner emptiness, with the use of psychoanalysis as his theoretical starting point. According to Schmidbauer (1977), issues can develop in early childhood (the oral phase) and he goes on to suggest that these issues can later be established in the so-called "helper syndrome"; where one unselfishly proffers oneself for others with the aim of suppressing one's own need for help. The helper syndrome is articulated in the weakness and helplessness; admitting to emotional struggle is only welcomed and supported in other individuals, but one's own self-image has to remain flawless. The inner condition of someone with the helper syndrome can consequently be explained as a neglected baby behind a beautiful, solid disguise: like a small child, I hunger and thirst for affection and security, but I am not able to admit it. Schmidbauer gives the following definition of the helper syndrome: "An incapacity to express one's own feelings and needs that has become a personality structure, coupled with an apparently omnipotent, unassailable façade in the area of social care" (Schmidbauer 1977). The medical profession is referred to as a helping profession with helper syndrome. Schmidbauer's research and observations have revealed doctors to be commonly addicted to drugs and alcohol, which can be attributed to the verbal needs of these helpers. Badcock (1986) explains unselfishness from a psychoanalytical aspect. In Chapter II, "Kin Altruism, Identification and Masochism" of "The Problem of Altruism" he quotes Anna Freud's opinion of people offering themselves. "Humane people are good out of the badness of their hearts." selfless sacrifice, according to Anna Freud, is less altruistic than people might anticipate. Altruism can take place from self-centred reasons. The most imperative psychological mechanism that can matter here is identification. One takes himself as the standard for identification (one mirrors one's own emotional needs onto another) and in the case of selfless

behaviour, the helper does everything possible in order to satisfy the help seeker (Schmidbauer 1977). It is familiar knowledge in social psychology that helping can be a good solution for a bad mood. Even though a positive frame of mind can be an effective cause/foundation of helping behaviour, some researchers consider that under particular circumstances a negative mood can have the same effect. For example, it is occasionally possible to alter a sad mood by doing something for someone else. Attention then becomes focused on others and their pleasure, not on one's personal pessimism. This explains that coping appears particularly functional when people believe they are responsible for their own bad mood (Gergen and Gergen 1986). As it has been noted throughout the literature, the biggest disadvantage/weakness most common among helping professionals is burnout and depression (Schuyt 2004). The Helper Syndrome can contribute to the absolute abusive types of relationships: the helper may progressively experience symptoms of burnout because sometimes their highest efforts might be considered with little gratitude and appreciation - no matter the amount of energy and effort they dedicate to the patient/client and consequently the helping professional might never reach to the goal where everybody is satisfied. Another harmful phase of the helping professional can be lack of self-awareness and mistreatment of the liability a helping professional has towards the patient/client. This is due to the fact that a helping relationship is usually unbalanced; individuals are rarely not on equal balance (Schuyt 2004). A good health care provider will be sensitive to the imbalance, while an obnoxious/abusive helper will take no notice of the imbalance and in worst cases the helper might even seek it. Instead of helping or guiding the patient/client in getting stronger, the helper tries to keep the patient/client dependent and concentrates on getting their own goals. To attain their goals, the helper may exploit their power or the trust of the patient/client. Therefore, whether the intentions for such manner are altruistic ('I want to give something back', 'I don't

want them to do the same mistakes I did', 'I want to share', 'I can do it!') or motivated by "dubbing" their own psychological problems; it is always an indication of emotional imbalance of oneself or others if an individual does not pay attention to their own limits and attempts to fix everything only by themselves. Being capable of handling or controlling such imbalance places exhausting demands on the integrity of the helper and the professional attitude which in its turn can progressively lead secondary traumatic stress symptoms such as burnout (Schuyt 2004).

2.3 Models of Secondary Traumatic Stress

Many etiological models of secondary traumatic stress have been developed to promote the discipline and its associated factors (Ortlepp and Friedman 2001). Focusing on models of STS, Figley (1995) stated that empathy and emotional energy comes with a cost. Figley's (1995, 2002) model focuses on the influence of nine variables that form a casual model for secondary traumatic stress. These are (1) empathetic capability, (2) exposure to the patient, (3) empathetic reaction, (4) compassion stress, (5) a sense of achievement, (6) emotional disengagement, (7) prolonged exposure, (8) traumatic recollections and (9) life disruptions. Dutton and Rubinstein meanwhile put forward also a model that contains four different factors of secondary traumatisation. The four parts of their model involve (1) the traumatic situation to which the trauma counsellor has been exposed, (2) the trauma counsellor's post-traumatic stress responses, (3) the trauma counsellor's coping strategies and (4) the personal and environmental mediators of secondary traumatic stress responses (Dutton and Rubinstein 1995). Beaton and Murphy have put forward a similar model that also accounts for organizational components such as role conflict, cultural norms and size of the organization (Beaton and Murphy 1995). Beaton and Murphy have in addition looked at mediating components such as training, the counsellor's social support and experience.

Ortlepp and Friedman (2001) differentiated between secondary traumatic stress and PTSD. These researchers suggested that some common environmental factors such as social support and life situations might play a part in STS which are of equal relevance as the exposure of the therapist to the traumatized patient.

2.4 Level of Exposure to Patients' Traumatic Material

Exposure to patients' traumatic material is a primary risk factor in the development of secondary traumatic stress (Figley 1999; Pearlman and Saakvitne 1995). Secondary traumatic stress cannot take place without this exposure to traumatic material. Correlation findings reported by several authors have supported a relationship between secondary traumatic stress and regular exposure to traumatized patients (Arvay and Uhlemann 1996; Birk 2002; Boscarino, Figley and Adams 2004; Wee and Myers 2002). Numerous studies (Brady et al 1999; Ortlepp and Friedmann 2001; Schauben and Frazier 1995) have also indicated a range of reactions from mild or not clinically significant to high levels of reactions (Arvay and Uhlemann 1996; Birk 2002; Wee and Myers 2002). This reflects the need for more research that focuses on secondary traumatic stress as well as research that incorporates programmes that deter vulnerability and increase awareness among professionals of secondary traumatic stress. Bride (2007) carried out research and included social workers who worked with victims of trauma and reported that 70.2% of participants indicated having experienced at least one reaction of secondary traumatic stress in the previous week and 15.2% of participants indicated secondary traumatic stress reactions at a level that met criteria for PTSD. Bride (2007) stated that the rate of PTSD in the general population is almost 7.8% (Wee and Myers 2002).

2.5 Type of Client Traumatic Material

Knight (1997) investigated therapist affective responses to working with adult survivors of child abuse and reported that 25% of the participants agreed they felt overwhelmed by their work with survivors. Furthermore, their work led to increased emotions of vulnerability in personal relationships. The most common affective reactions were anger at their patient's perpetrators along with sadness and horror in reaction to their client's victimization (Knight 1997). In a qualitative study conducted by Iliffe and Steed (2000) 18 counsellors who worked with both perpetrators and survivors of domestic violence experienced horror while listening to clients talk about being extremely abused. Sadness was also indicated among the respondents, which was linked with their patient's experience of violence. Many of the respondents indicated that they experienced visual images of the material they heard from patients, including several violent images they believed would be with them permanently. Iliffe and Steed (2000) noted that the participants reported physiological responses ranging from 'a general feeling of heaviness, churning stomach, nausea, to feeling shaken' after listening to violent narratives.

Dane (2000) also conducted a qualitative study of 10 child welfare workers and each of them reported difficulty in coping with feelings of sadness related to their work. The most disturbing material reported by the participants was the death of a child from maltreatment or neglect. All of the respondents who experienced this reported symptoms consistent with secondary traumatic stress. The symptoms reported included 'inability to concentrate, irritability, and intrusive images of the trauma' (Dane 2000). Results also suggested that this kind of traumatic material might be predictive of secondary traumatic stress. Furthermore, the United States Census Bureau (2005) indicated that there were 5.4 million personal crime victims in America, with only 1.4 million violent crime offences reported by the Federal Bureau of

Investigation (2006). Kilpatrick et al (2003) noted that crime victims have a higher percentage of developing PTSD during their lifespan compared with people who have not been victims of crime (25% vs. 9.4%).

2.6 Personal History of Trauma

A professional's personal experience with trauma is the main consideration for evaluating their predisposition to developing compassion fatigue. Some researchers have indicated that therapists who have a personal trauma history indicate higher levels of secondary traumatic stress than those without a personal trauma history (Cornille and Meyers 1999). This notion was supported by Nelson-Gardell and Harris (2003) where the researchers sampled 166 child welfare workers including child protection workers, supervisors and managers who participated in an evaluation of secondary traumatic stress in a training programme in two south-eastern American states. Consistent with several studies that have used different populations, Nelson-Gardell and Harris (2003) found that personal history of childhood trauma increases child welfare workers' risk of secondary traumatic stress. More specifically, a combination of more than one childhood trauma indicated the greatest risk for developing STS, with emotional abuse and neglect being the strongest predictors of secondary traumatic stress.

Itzhaky and Dekel (2005) confirmed that 'there is ample evidence that therapists who have been exposed to traumatic events in the past can experience greater distress than their unexposed counterparts in the process of treating trauma victims' (p. 337). Figley (1995) argued that a clinician's trauma history may be influential in contributing to the likelihood of developing compassion fatigue. Moreover, a clinician's personal family history with trauma may be an indicator of one's level of vulnerability to another's traumatic experiences (Miller 2002). Bride

(2007) also noted that personal trauma history, especially in childhood, might be linked as a possible risk factor in developing compassion fatigue.

2.7 Professional Experience

A different and vital variable linked with a risk of secondary traumatic stress is the level of professional experience (Neumann and Gamble 1995). Several studies have suggested that new and lesser experienced therapists have displayed higher levels of psychological distress and increased secondary traumatic stress reactions than therapists with more experience (see Betts et al. 2001; Chrestman 1999; Follette et al 1994; Way et al 2004). Other researchers and studies have not been as positive in suggesting that less experienced personnel are at an increased risk of secondary traumatic stress (Ghahramanlou and Brodbeck 2000; Jenkins and Baird 2002; Kassam-Adams 1999; Ortlepp and Friedman 2001). For example, Cornille and Meyers (1999) found that child protection professionals who were employed for a long time indicated higher levels of secondary traumatic stress than those who had worked fewer years in the field. And Wee and Myers (2002) reported that the more professionals experienced trauma, levels of compassion fatigue and burnout increased.

Wee and Myers (2002) carried out research with mental health professionals who provided disaster services after the Oklahoma City bombing. The study found that a higher risk of secondary traumatic stress and burnout was linked with increased time spent working with survivors. The discrepancies in some of these findings might be an outcome of the different population segments tested, which included counsellors, marriage and family therapists, social workers and psychologists. Overall, such segments reflect the diversity of mental health workers who come into contact with patients who have survived traumatic experiences; each of these professional groups receives different training. Additionally, secondary traumatic stress

measurement techniques were not uniform – this alone might affect the result of the investigations and help explain the different results.

2.8 Personality Factors and Personal Life Stressors

Personality factors and interpersonal style (Dutton and Rubinstein 1995) have also been reported as impacting secondary traumatic stress symptoms. For example, research has indicated that personality variables such as a therapist's self-esteem, perceived ego strength and resources, and his/her capability to self-regulate can affect vulnerability to secondary traumatic stress (Dutton and Rubinstein, 1995; Pearlman and Saakvitne 1995 a,b).

Follette, Polusny and Milbeck (1994) and Schauben and Frazier (1995) have reported that therapists who experience high levels of stress and those with negative coping strategies tend to be at greater risk for secondary traumatic stress. They suggest that active coping strategies like the construction of an action plan to resolve issues have been found to lessen secondary traumatic stress reactions in those counsellors who adopt them.

2.9 Support System

Further research work has focused on the availability of a support system that can reduce the stress of working with clients or patients who have been through traumatic events (Ennis and Home 2003; Kadambi and Truscott 2004). Kadambi and Truscott (2004) reported reductions in levels of secondary traumatic stress among healthcare providers who had the opportunity to talk about the personal influences of dealing with traumatized clients and patients than those that did not have such opportunity (Schauben and Frazier 1995). Ennis and Home (2003) found social support was beneficial in the reduction of levels of post-traumatic stress symptoms. Ennis and Home (2003) and Herman (1992) all stated that taking up personal psychotherapy and other

kinds of social and emotional support and comfort might help reducing secondary traumatic stress and its related symptoms.

2.10 Spirituality

Brady et al. (1999) as well as Pearlman and Saakvitne (1995, a, b) found spirituality, or the sense the therapist makes out of the traumatic life situations, also plays a part in the manifestation of secondary traumatic stress symptoms. According to Pearlman and Saakvitne (1995a), those therapists who lack a clear explanation of life and causality or who have struggled with problems regarding meaning, purpose and spirituality might be at risk of secondary traumatic stress. Dane (2000) stated that spirituality was a vital coping mechanism utilized by child welfare professionals that helped them find meaning in their job. Therapists who do not have a clear view of life hence struggle with the problems of meaning in life, purpose or spirituality and might be at risk of secondary traumatic stress.

Solomon and Berger (2005) studied resiliency among 87 ZAKA (Hebrew initials for identification of disaster victims) body handlers, a job that involves repeated contact in the aftermath of terror attacks, and reported that only 2.3% (two participants) indicated criteria for PTSD, and 18.4% (16 participants) displayed symptoms of subclinical PTSD. Solomon and Berger suggested that various matters helped the workers' ability to cope but the most important were positive feelings resulting from altruistic and religious extrinsic rewards. Some parts of Judaism introduced in the ZAKA group saw their contribution as a spiritual experience fulfilling a religious duty by performing a Mitzva (a blessing) which is featured to promoting resilience. Religious coping is seen as a method of adding meaning and purpose to an experience that allows for a sense of control to be activated within the coping individual (Solomon and Berger 2005). Overall, it seems that religious coping is helpful in counteracting the consequences of

trauma, especially in the aftermath of terrorist attacks – terrorism is seen as an act of evil which destroys any sense of meaning, safety and control over a person's world (Davidwitz-Farkas and Hutchison-Hall 2005).

2.11 Work Environment

The work environment or place of work (Pearlman and Saakvitne 1995a,b) can impact secondary traumatic stress. This includes one's professional, social and organizational environment. Societal and organizational concepts of trauma can play a part in the manifestation of secondary traumatic stress (Dutton and Rubinstein 1995; Pearlman and Saakvitne 1995a,b). Furthermore, Adams et al. (2008) noted that a work environment that lacks in support can increase distress and burnout among professionals. For such professionals the exposure to traumatized patients does not itself develop as secondary traumatic stress but secondary traumatic stress and burnout are more likely linked to distinctive features of the workplace environment. Regehr et al (2004) also suggested that organizational factors had the biggest effect on distress among social workers. However, some other researchers reported dissimilar effect on burnout (Conrad and Kellar-Guenther 2006; Schauben and Frazier 1995).

2.12 Supervision

Lack of professional trauma supervision or consultation, as well as insufficient peer support or lack of respect for patients or therapists and poor physical safety or space can increase therapists' susceptibility to secondary traumatic stress (Dutton and Rubinstein 1995). Brady et al. (1999) claimed that organizations can help decrease secondary traumatic stress by providing an 'emotionally supportive, physically safe and consistently respectful work environment'. Other components that can decrease the negative impact of secondary traumatic stress include company

health insurance, holiday leave, satisfactory pay conditions and sick leave (McSwain et al 1998; Pearlman and Saakvitne 1995a,b). Organizations should develop competent trauma-specific supervision, training and consultation, and ensure that continuous professional development is available for workers (Cerney 1995; McSwain et al 1998; Yassen 1995). McCann and Pearlman (1990) have discussed the significance of setting aside specific time during supervision for therapists to talk about feelings and reactions to difficult cases.

2.13 Professional Ethical Standards and Codes of Practice

Munroe (1999) has outlined significant ethical considerations connected with secondary traumatic stress among therapists. He has stressed the necessity for therapists to recognize the impact of secondary traumatic stress on themselves and others and the necessity to take action to ensure the well-being of staff who work with traumatized patients. Such measures can help in addressing the vital issue that patients are receiving skilled care. Munroe (1999) suggested that there is an ethical duty to be aware of the necessity for regular self-care for therapists. He also argues that there should be an ethical duty for therapists to be trained in how to deal with exposure to their patients' traumatic material. The American Counselling Association and the National Association of Social Workers codes of ethics stress the necessity for practitioners to be aware of signs of personal impairment because of psychological distress. Both of these associations address an obligation to continued education to promote awareness of emerging developments in the field. Brady et al (1999) report the necessity to educate students about the possible harm of working with traumatized individuals. The authors go on to suggest that normalizing students' responses can help reduce the stigma they might feel so that effective coping techniques can be taught.

2.14 Prevention and Treatment Techniques for Secondary Traumatic Stress

Prevention and treatment for secondary traumatic stress should be anticipated in the workplace as STS is a common reaction to an abnormal level of trauma or violence or unusual situations such as natural disasters, experienced personally or from working with survivors and traumatized individuals. While secondary traumatic stress is not a predictable outcome for all workers who deal with traumatized people, preparing for the impact of distress and preventing normal stress reactions from developing into secondary traumatic stress should be part of prevention processes. Prevention of STS involves developing the idea of preparation, which starts with recognition of the effects of working with traumatized individuals.

2.14.1 Building Resilience and Coping Skills

Collins (2008) has suggested that resilience is a vital characteristic that provides professionals with the ability to work with human suffering on a daily basis without succumbing to psychological pain and despair. Resilience is a source of personal ability and characteristics that help the person to rebound and cope successfully despite significant hardship or adversity and an understanding of what protective measures are vital for developing healthy functions among professionals working with victims of trauma (Collins 2008).

Jacobsen et al. (2004) observed mental health social workers and their reactions to fatal and non-fatal client suicidal behaviours. They reported that female and male therapists responded differently to the stress, with female therapists experiencing more shame and guilt following fatal patient suicidal behaviours. Males and females might utilize different ways of coping with severe stress events such as avoidance, compartmentalization and internalization which might provide resilient outcomes, as opposed to other ways of coping (e.g. shame, guilt, self-doubt and preoccupation) which may result in negative outcomes. Few researchers (Lazarus and Folkman

1984; Ting, Jacobson and Sanders 2008) have recognized the resilient clinician as an individual who uses protective coping successfully to become accustomed to and protected against trauma. Such research work has noted adaptive methods utilized constantly in changing cognitive and behavioural efforts to manage the specific external and/or internal demands that are recognized as taxing or exceeding the resources of the person involved (Lazarus and Folkman 1984).

In contrast, maladaptive behaviours and conditions that damage adaptive methods have been recognized as developing clinician vulnerability. Lawson and Venart (2005) argued that therapeutic harm occurs when a therapist's professional functioning is impaired by stress, trauma or difficult life events. These researchers also noted various threats to a therapist's ability to maintain a healthy functionality with problems that include substance abuse, mental illness, personal crisis, physical illness or debilitation. Lawson and Venart (2005) also noted traumatic situations as being a contributor to vicarious trauma or burnout. They confirmed that protecting against vulnerability to harm entailed effectively utilizing adaptive coping methods and different self-care activities such as discussing cases with work colleagues, spending time with family or friends, attending workshops, travel, hobbies, talking with work colleagues between sessions, socializing, exercise, limiting case loads, developing a spiritual life and receiving supervision.

Ablett and Jones (2007) highlighted precursor factors that played a role in endorsing resilience and sustaining well-being in palliative care nurses. Their study suggested constructs connected to hardiness and consistency that assisted both meaning and purpose in stressful cancer care workers dealing with repeated exposure to the pain, suffering and death of patients. Personal attitudes, job satisfaction and methods of coping also contributed to the nurses' resilience. Ablett and Jones concluded that the nurses' adaptive attitude towards change was the main factor for hardiness and resilience. Further research recognizing features that endorse

resilience in clinicians is needed in order to create methods for protecting the health and well-being of workers and trauma victims. Eventually it might be possible to recognize predictors of resilience in association with the personal traits of mental health workers. Researching how these predictors manipulate positive results that protect mental health professionals from compassion fatigue might lead to methods of constructing them in preventive approaches that can be adapted among general population of clinicians (Ablett and Jones 2007).

Cognitive restructuring and skills training are developed to promote mastery, collaboration and optimism. Cognitive restructuring is designed to help manage work-associated stress. Psycho-education helps participants to comprehend isolating behaviours that can be an outcome of work-related stress (SAHMSA 2008). The intervention had promising outcomes and is part of a growing understanding that resiliency is a moderating factor in secondary traumatic stress.

The Accelerated Recovery Program (ARP) for compassion fatigue is a treatment strategy generated by Gentry et al. (2002). This particular comprehensive treatment programme includes a five-session treatment protocol and is the first of its kind. The programme goals include symptom identification, recognition of secondary traumatic stress triggers, identification and utilization of resources, learning grounding and containment skills, initiating conflict resolution, and implementing a supportive aftercare plan. This aftercare plan is called the Pathways self-care programme (Gentry et al 2002). The ARP follows a standardized component treatment model that addresses therapeutic alliance, qualitative assessment of secondary traumatic stress, anxiety management, narrative, exposure/resolution of secondary traumatic stress, cognitive restructuring, and the Pathways self-care and aftercare plan (Gentry et al 2002).

2.14.2 Improving Training

Several professions such as law enforcement, disaster relief workers and therapists come into contact with trauma. With regard to therapists, there is a lot of training in diagnosis, reporting requirements and establishing therapeutic alliance to combat trauma-related reactions. However, little has been put in place about working and dealing with patient's traumatic material. Cornille and Meyers (1999) recommend educating those working with traumatized people to identify secondary traumatic stress and further teach them to recognize, predict and prepare them with secondary traumatic stress reactions. Secondary traumatic stress reactions need to be normalized and professionals need to be aware of personal factors affecting secondary traumatic stress such as personal history of trauma, coping techniques and work environment.

Chrestman (1999) reported empirical evidence that supports the utilization of additional training to reduce the reactions of PTSD among counsellors working with traumatized victims. Follette et al (1994) indicated that 96% of mental health workers who were educated about sexual abuse reported the experience was essential in making them effective during difficult patient cases. Alpert and Paulson (1990) developed graduate training courses to assist students to have strong emotional reactions in dealing with traumatic material. Setting the stage for secondary traumatic stress and its impact at this point in a mental health workers training can help in later practice. O'Halloran and O'Halloran (2001) also provided students with additional self-care methods that could guide them in later professional life. These self-care methods involve behavioural strategies such as eating balanced meals, proper sleep and exercise and the importance of relaxation, recreation and play. The authors also prepared students for the impact trauma work might have on them by encouraging the students to develop self-care plans. They recommended coping methods like journalizing, physical release such as crying, or talking to

someone the students felt comfortable with. O'Halloran and O'Halloran (2001) also addressed developing and utilizing support systems and exploring spirituality as additional prevention methods.

2.14.3 Agency Policies

Trippany et al. (2004) have highlighted the responsibility of agencies that treat trauma to avoid secondary traumatic stress in their service providers. They recommend formal measures of informed consent regarding risk of trauma counselling to new counsellors. Furthermore they recommend professional development resources like opportunities for supervision, continuing professional development education and availability for consultation. Pearlman and Saakvitne (1995) recommend that giving employees benefits to cover personal counselling and paid holiday, and limiting the number of trauma cases on a counsellor's caseload can help prevent secondary traumatic stress. Cornille and Meyers (1999) recommend that agencies with high levels of trauma cases reduce the amount of hours employees are required to work to no more than 40 per week. They also highlight the necessity for agencies to make sure a safe and supportive work environment is in place. Agencies should develop safety procedures for counsellors who go into dangerous areas and situations. Providing a safe place for counsellors to release feelings and discuss their specific fears around trauma cases can help reduce severe secondary traumatic stress reactions (Cornille and Meyers 1999).

2.14.4 Professional Peer Group

Flannery (1990) investigated the importance of social support within the professional peer group as a prevention method for secondary traumatic stress. Examples of helpful social support include emotional support, information, social companionship and instrumental support. These are most useful in the context of a professional group with unambiguous formal organization

such as a consultation group, treatment team, case conference or clinical seminar (Flannery 1990). Professional peers can be supportive by providing resources such as how to deal with paperwork, or giving support during non-working hours (Catherall 1995). Moreover, peer support can help workers clarify insights and emotions and it can help correct distortions the counsellor may hold in regard to traumatic cases. It can also provide perspectives, reframing and empathy, all of which can be vital factors in the prevention of secondary traumatic stress (Catherall 1995). This kind of group support should be considered an addition to and not a substitute for clinical supervision. Figley (2000) suggested a 5:1 ratio rule – for every five hours of discussing a traumatic case there should be one hour of personal processing time. This can take the form of non-work conversation or a formal post-incident debriefing.

2.14.5 Effective Coping and Self-care

Effective coping activities prevent secondary traumatic stress reactions (McSwain et al. 1998; Pearlman and Saakvitne 1995a, b; Schauben and Frazier 1995). Among these are clear boundaries between home and work and taking part in regular physical activity that helps one to relax and promotes physical health. Additionally, taking time off work, journalizing, listening to music, pursuing hobbies and meditation are recommended coping methods. Techniques such as limiting exposure to traumatic material are also recommended (e.g. books, movies). Norcross (2000) wrote that important self-care strategies for therapists are diversifying and balancing their patient caseloads. Secondary traumatic stress might be prevented if the therapist's caseload has an appropriate balance of patient issues (trauma and non-trauma), types of therapy (group, families, individual and couple) and other professional practices including supervision, teaching, research and writing (Pearlman and Saakvitne 1995a,b). It is also vital to foster relationships with other workers in the field for support. Staying connected with traumatized patients, utilizing

support groups, attending workshops and sharing coping methods with other therapists are also useful means of handling secondary traumatic stress.

Additionally, Moran (2002) recommends the use of humour as a useful coping method, one that will enhance physical well-being. Self-care is a crucial part of prevention of secondary traumatic stress. A study of 117 trauma therapists carried out by Pearlman (1995) found that at least one-third of the participants regarded socializing, exercising and spending time with family and friends as helpful in coping with traumatic material. Wee and Myers (2002) list personal stress management activities in their research of mental health professionals after a disaster event. These include leisure and diversion activities such as dinner, social activities, reading and spending time outdoors. Other self-care strategies include family time, exercise, relaxation, and meditation, informal group therapy with co-workers and personal counselling and prayer (Wee and Myers 2002).

2.15 Chapter Summary and Concluding Remarks

The current literature review provides a thorough text on the relationships between job burnout and STS among healthcare professionals working with traumatized clients/patients. This review shows the moderating effects of theoretical frameworks, type of measures, language, country where data were collected, gender and type of occupation related to trauma exposure. In general, burnout and STS or compassion fatigue is likely to co-occur among professionals exposed indirectly to trauma through their work. Applications of measures developed within the compassion fatigue framework may result in obtaining stronger relationships between job burnout and STS compared to the use of measures derived from different theoretical frameworks (e.g. the approach to STS focusing on PTSD-like symptoms and the burnout framework). PTSD and STS appear to be part of the same phenomenon that can impact professionals who have

exposure to trauma patients. The current literature has provided evidence that the developments of intrusion and avoidance symptoms are part of secondary traumatic stress and has confirmed the prevalence and severity of the secondary trauma condition among a range of victims, professionals and survivors.

Focusing on professionals working in this particular field, Figley (1995) reported that healthcare professionals have to develop precautionary measures against STS. Every trauma witnessed or experienced by professionals (whether it is physical, emotional or social) must be regarded as a potential threat to the welfare and well-being of the caregiver – the impact of such experiences must be moderated to ensure that a healthy working environment is retained. This requires the provision of comprehensive support, not only for patients but for caregivers as well.

2.16 Purpose of this Research

Previous literature highlighted the apparent need for more quantitative studies that substantiated many of the concerns raised in research regarding secondary traumatic stress disorder among healthcare providers. The current research fulfils that need – it is a quantitative investigation that includes seven different professions and assesses secondary traumatic stress including compassion fatigue, using various measures such as the Secondary Traumatic Stress Scale (STSS) (Bride et al. 2007), the Professional Quality of Life Scale (Pro-QOL) (compassion fatigue, burnout and compassion satisfaction; Stamm 2000), and the Impact of Events Scale (IES) (PTSD symptoms; Weiss and Marmar 1997). The current investigation used a sample of Accident and Emergency unit doctors and nurses, counsellors, psychologists, psychiatrists, social workers and ambulance technicians.

Due to the lack of research in the field of secondary traumatic stress, the aim of the present study is to investigate several professions at once to compare how different (helping) professions

play a role in the development of secondary traumatic stress and its related emotional stressors (compassion fatigue, burnout, intrusion, avoidance and arousal). Furthermore, the current study aims also to examine the impact of secondary traumatic stress on helping professionals' general health and how prolonged (years) of experience in the profession might affect the carers' general well-being. Accordingly the following four hypotheses have been formulated to address the primary research aims.

2.16.1 Research Hypotheses

- H1: Professionals working with survivors and victims of trauma are likely to be exposed to secondary traumatisation reactions and experience poor mental health and reduced emotional well-being. Also, professionals may react differently to the conditions of working with victims of trauma and survivors.
- H2: There will be a difference between males and females in mental health well-being, secondary traumatic stress and reactions.
- H3: Years of work experience in a particular profession will predict the occurrence and levels of stress in such a way that the longer an individual is employed in the profession, the less secondary traumatic stress reactions will manifest, regardless of the age of the participants.
- H4: The profession will moderate the relationship between years of employment and levels of secondary traumatic stress and its related symptoms.

Chapter Three

Methodology

3.0 Introduction

This chapter presents the research methodology of this PhD research. The main sections of this chapter will describe the participants and the inclusion/exclusion criteria for taking part in the study, reviews of the recruitment procedures, a description of measurements used and their psychometric properties and, lastly, the ethical considerations including consent and confidentiality.

3.1 Participants

Participants in this study were an opportunity sample of volunteers from healthcare professions and settings, comprising accident and emergency (A&E) doctors, A&E nurses, ambulance technicians, psychologists, psychiatrists, counsellors and social workers. Participants were recruited from London Royal Hospital, Kings College Hospital, Maudsley Hospital, London Bridge Hospital, Lister Hospital (Chelsea Consulting Rooms), Guy's Hospital, City Psychology Group, Private Psychiatry (BMI Shirley Oaks Hospital, BMI Manor Hospital, Sevenoaks Medical Centre, BMI Fitzroy Square Hospital, BMI Sloane Hospital), St John Ambulance Unit, Health and Social Care of Tower Hamlet Council, Health and Social Care of Southwark Council, Health and Social Care of Lambeth Council and Health and Social Care of Camden Council. All the participants at the time of data collection had been employed in one of the above institutions for over a year.

Participants who responded to the research invitation and chose to participate were briefed verbally on the aims and rationales of the study and provided with a hard copy of the survey

comprising five established questionnaires. To take part in the current study, participants had to be mental health professionals, accident and emergency doctors and nurses who were actively engaged in work with patients in the United Kingdom. That is to say, participants had to hold the professional title of A&E unit doctor, A&E unit nurse, psychologist, psychiatrist, counsellor, social worker or ambulance technician. Participants had to be licensed or provisionally licensed to practice under their professional title. Individuals who did not hold a license or provisional license to practice mental health services were excluded. This included telephone counsellors, case managers, law enforcement and voluntary workers.

To gather enough data for accurate and meaningful analysis, a sample size of 160–240 participants was estimated. A total of 242 individuals initiated participation in the study. Of this initial group, 15 respondents were excluded because they failed to complete some demographic items of the survey and thus did not meet the inclusion and exclusion criteria. An additional nine respondents were excluded because they failed to hold a license to practice mental health services and another eight respondents were excluded because they were telephone counsellors. As such, the final sample comprised 210 participants of whom 80 (38.1%) were males with the age range 20–64 years ($M = 43.85$, $SD = 10.1$), and 130 (61.9%) were females with the age range 25–60 years ($M = 39.72$, $SD = 7.42$).

Each of the professional groups comprised 30 participants: in four of the groups (A&E unit doctors, psychologists, psychiatrists and ambulance technicians) the sample was gender-balanced or close to being gender-balanced, whereas the remaining three professions (paediatric A&E unit nurses, mental health counsellors and social workers) were dominated by female participants. Tables 3.1a and 3.1b summarize the participants' demographics data for male and female participants. Furthermore, the tables also display the percentages of male and female participants

from all seven professions included in the study. Taking into account that female practitioners generally dominate certain professions used in this research (Albelda 1986; Beller 1982; Boisso 1994; Karmel and MacLachlan 1988), the sample can be considered as representative of the general gender distribution in those professions.

Table 3.1a: Summary of Participants' Demographic Data for Male Participants

<i>Variables</i>	<i>Males</i>					
	<i>Range</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>% Males</i>	<i>% Profession</i>
Years Of Employment	1–36	14.63	9.26			
Age Range	20–44	43.85	10.1			
Emergency unit doctor				15	18.8%	50.0%
Emergency unit nurse				2	2.5%	6.7%
Counsellor				10	12.5%	33.3%
Social Worker				9	11.3%	30.0%
Psychiatrist				13	16.3%	43.3%
Psychologist				14	17.5%	46.7%
Ambulance Technician				17	21.3%	56.7%

Table 3.1b: Summary of Participants' Demographic Data for Female Participants

<i>Variables</i>	<i>Females</i>					
	<i>Range</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>% Females</i>	<i>% Profession</i>
Years of Employment	1–38	10.56	7.21			
Age Range	25–35	39.72	7.43			
Emergency unit doctor				15	11.5%	50.0%
Emergency unit nurse				28	21.5%	93.3%
Counsellor				20	15.4%	66.7%
Social Worker				21	16.2%	70.0%
Psychiatrist				17	13.1%	56.7%
Psychologist				16	12.3%	53.3%
Ambulance Technician				13	10%	43.3%

3.2 Procedure

Permission for the data collection was obtained from the participating organizations' managers and supervisors. The ethics approval for this study was obtained from London Metropolitan University's ethics board. Participants were approached in their place of work and they were briefed on the nature and purpose of this study. All participants were informed that their participation in this study was voluntary and that they had a right to withdraw at any time during or after their participation. They were reassured that all the information provided to the researcher would be kept confidential prior to data analysis and would be anonymized prior to any data analysis. The participants were also informed that all the data would be used for the current research purpose only and would be stored securely for the duration of the project and thereafter for the duration of 6 years in accordance with British Psychological Society (BPS) guidelines of record-keeping. Participation in this study was conditional on providing informed consent.

Each participant was given a hard copy of the survey to fill in. On average it took participants 30 minutes to complete the survey. A researcher was present at all times and was available to answer questions with regard to definitions of the symptoms. However, there were a few exceptions where participants could not fill in the survey in the presence of a researcher and were allowed to take questionnaire with them and fill it in at a later stage. Those participants who chose to do so were provided with an A4 envelope with the researcher's name on it. They were informed that once they had completed the questionnaire, they should put it in the envelope provided by the researcher, seal it for confidential continuity and return it to a reception desk – the researcher collected them within seven working days. Following the completion of the questionnaire, the reassurance of their willingness to participate was obtained. All participants

were given a debrief form containing information about the study and the primary investigator's contact details in case anyone had any questions or was interested in finding out more about the aim of the research and its final outcomes.

3.3 Instruments/Apparatus

A total of five scales and one demographic questionnaire were used in the study. The General Health Questionnaire (Goldberg and Hillier 1979) was included to assess the general health of the professionals; the Impact of Event Scale (Weiss and Marmar 1997) was also utilized to assess the emotional impact of secondary traumatic stress; the Secondary Traumatic Stress Scale (Bride et al 2003) was adapted to assess various dimensions of PTSD such as intrusion, avoidance and arousal, and secondary traumatic stress. Compassion satisfaction, compassion fatigue and burnout were additionally assessed through a Quality of Life Questionnaire (Stamm 2000).

3.4 Demographic Questionnaire

The demographic questionnaire comprised four questions assessing age, gender, current profession and years of experience in the profession.

3.5 The General Health Questionnaire

The General Health Questionnaire (GHQ) measure is a self-reported questionnaire that assesses professionals' general health. This scale is available in four versions: 60-item version (GHQ-60), 30-item version (GHQ-30), 28-item version (GHQ-28) and 12-item version (GHQ-12). In this study the General Health Questionnaire 30 was used (Goldberg 1972, 1979; Goldberg and William, 1988). GHQ-30 is a self-administered screening questionnaire designed to detect (screen) those with a diagnosable psychiatric disorder (Goldberg 1972). It is widely known and

is used as a screening measure to detect the status of mental well-being in the general population within a given community (i.e. non-psychiatric clinical settings or outpatient clinics). The measure evaluates the respondent's present health status and asks if that differs from his or her usual state. This measure was chosen based on its ability to screen participants quickly and reliably. GHQ-30 is the only GHQ questionnaire that focuses solely on the factors corresponding to anxiety, feelings of incompetence, depression, difficulty in coping and social dysfunction, which are the essential factors that are highly associated with secondary traumatic stress (Figley 1995). As noted above, GHQ-30 is a widely used instrument by researchers in different fields, including those of occupational health, medicine and psychology, and clinicians who wish to screen individuals for psychiatric disorders.

3.5.1 Calculating GHQ-30 Scores

The four versions of the GHQ are connected to each other because they contain similar items, although diverse scoring techniques can be used for the questionnaire (including a modified Likert-type scoring technique) and a total score is produced. The total score indicates the intensity of psychological morbidity where higher scores show higher levels of morbidity and/or weaker general health. For each item the respondents have to indicate the occurrence of a particular symptom on a four-point scale: 1 – 'less than usual', 2 – 'no more than usual', 3 – 'more than usual', and 4 – 'much more than usual'.

Goldberg (1979) explained that with positive questions such as 'Been able to enjoy your normal day-to-day activities', the response 'same as usual' evidently shows normal, healthy functioning and for this reason the absence of a symptom. For 'negative' questions the response 'no more than usual' shows what is normal for the person, but it also indicates the occurrence of a symptom, that is to say a chronic one. Since chronic circumstances can manipulate current

mental health, it can be said that they should be considered when obtaining a score from the General Health Questionnaire. Even though there are a small number of accounted data on the reliability of the GHQ, at least six studies have focused on the validity of diverse versions of the GHQ, four in general practice consulting surroundings, and two in community assessments (Benjamin et al. 1982; Finlay-Jones and Murphy 1979; Goldberg and Blackwell 1970, Tarnopolsky et al. 1979; Tennant 1977). These six validity studies have recognized that the GHQ has a sensitivity of ($A/ = 74\%$) and specificity of ($M = 82\%$), and an adequate misclassification rate of ($Af = 18\%$) as a screening tool in general practice and community surroundings. As such, this measure can be considered a valid tool for assessing participants' general health and well-being.

3.5.2 Reliability and Validity of GHQ-30

A recent study tested the reliability and validity of GHQ-30 (Dale et al. 2012). The reliability of GHQ-30 was examined by assessing the internal consistency (homogeneity) with item-to-total correlations, calculated by Spearman's rank correlations (r_s) between each item and the total scale. Each item was excluded from the total scale score when that particular item was analysed (Streiner and Norman 2003). Internal consistency was also calculated with the Cronbach's alpha 0.90. Construct validity of GHQ-30 was measured by comparing 'known groups' of people who were predicted to have high scores (i.e. those who perceived themselves to be in ill health and those who were perceived as having helplessness, loneliness, anxiety and depressive mood), with other 'known groups' of people with expected low scores (i.e. those who perceived themselves to be in good health and who did not perceive themselves as having helplessness, loneliness, anxiety and depressive mood). The purpose of these group characteristics relied on their expected relationships to mental health. Differences in median GHQ scores between these groups were calculated using the Mann-Whitney U-test for independent samples. Construct

validity of GHQ-30 was also measured by performing an explorative factor analysis; factor loadings greater than 0.40 were used as cut-off values for including the items in a factor. The chi-square test was used to observe sex differences, and the t-test for unrelated samples was used to test differences in age between the study participants and the dropouts.

The obtained Cronbach's alpha reliability coefficient of 0.93 indicated a high level of homogeneity of the scale, and this outcome is in agreement with numerous former studies testing reliability and validity of GHQ-30. Homogeneity of the scale was also established in the item-to-total correlations, which presented that all items correlated significantly to the total scale ($r_s = 0.22$). As suggested by Streiner and Norman (2003) the lowest value for item-to-total correlations should be $r = 0.20$. Furthermore, a general tendency was that the negatively worded items, reflecting mental distress or decline, had higher correlation values with the total scale than did the positively worded items which reflected coping abilities and social attachment. Construct validity was clearly supported by significant differences in the total GHQ-30 scores between groups with expected high and low scores. The outcomes specify that the apparatus could be suitable for screening mental conditions like depression and anxiety, perceived helplessness and loneliness, and perceived health in general. Corresponding outcomes were observed in the study by Dale et al. (2012) regarding scores for groups with good or poor health ($P = 0.004$); groups who perceived loneliness or not ($P = 0.001$); groups who perceived anxiety or not ($P = 0.035$); and groups who felt depressed or not ($P = 0.001$). All these measurements are, to different extents and in different operationalized terms, included in the GHQ-30 (Goldberg, 1988; McDowell, 2006). Construct validity was also supported by a logical four factor solution that explained 50.0% of the variance.

Regarding the several versions of the GHQ that have been developed, the full 60-item version is ideally recommended when possible (Streiner and Norman 2003). However, that version of the instrument is rather comprehensive and a lot of physical items are included. In the shortened versions the physical symptoms are removed, and among the several existing versions the 30-item GHQ has been used most. The 30-item version has been clearly recommended for use in general practice for screening mental health issues among helping professionals across many countries (McDowell 2006).

3.6 The Pro-QOL Scale

Professional Quality of Life brings scale together two aspects, the positive (compassion satisfaction) and the negative (compassion fatigue). Compassion fatigue is divided into several components. The first component considers matters such as exhaustion, frustration, anger and depression which are factors of typical burnout. Secondary Traumatic Stress is a negative feeling that concerns fear and work-associated trauma. It is vital to consider that various trauma at work can be primary (direct) trauma or indirect. Hence, work associated trauma can be a combination of both primary and secondary trauma.

Burnout is the negative effects of caring which is described as compassion fatigue. Most individuals have an instinctive idea of what burnout is. From a research point of view, burnout is linked with emotions of hopelessness and difficulties in handling work or doing one's job effectively. These negative emotions or feelings tend to have a gradual onset. They can make one individual feel that their efforts do not make a difference or they can be linked with a very high workload or a non-supportive work environment.

Secondary traumatic stress is a factor of compassion fatigue. Secondary traumatic stress is about work-related exposure to individuals who have been through traumatic situations. The

negative effects of secondary traumatic stress may involve fear, sleep difficulties, intrusive images, or avoiding reminders of the individual's traumatic experiences. Secondary traumatic stress is linked to vicarious trauma as the two terms share a lot of similar characteristics.

3.6.1 Calculating the Pro-QOL Scale Scores

There are three steps when scoring the outcome from the Pro-QOL. The first step is to reverse some items. The second step is to sum the items by subscale and the third step is to convert the raw data score to a t-score:

Step 1: the items 1, 4, 15, 17 and 29 are reversed into 1r, 4r, 15r, 17r and 29r (1=5) (2=4) (3=3) (4=2) (5=1).

Step 2: the items below for each subscale are summed up:

CS = SUM (pq3, pq6, pq12, pq16, pq18, pq20, pq22, pq24, pq27, pq30).

BRN = SUM (pq1, pq4r, pq8, pq10, pq15r, pq17r, pq19, pq21, pq26, pq29r).

STS = SUM (pq2, pq5, pq7, pq9, pq11, pq13, pq14, pq23, pq25, pq28).

Step 3: the Z scores are converted into t-scores with raw score mean = 50 and the raw score standard deviation = 10.

The average score for compassion satisfaction scale is 50 (SD 10; alpha scale reliability .88). Almost 25% of individuals score higher than 57 and almost 25% of individuals score below 43. Therefore, if a person is in the higher range, this indicates that the person receives professional satisfaction from his/her position. If the scores are below 40, this indicates either issues with the job or other possibilities, such as, developing satisfaction from activities other than their job.

The average score on the burnout scale is 50 (SD 10; alpha scale reliability .75). Nearly 25% of people score over 57 and nearly 25% score under 43. If a score is below 18, this indicates positive feelings regarding an individual's ability to be efficient and productive at work. If a

participant's score is 57, the participant might want to consider what is taking place at work that is making him or her feel that they are not efficient or productive at work. The score might mirror the individual's mood – maybe the participant was having a bad day or needs time off work. If the high score carries on, or if it is reflective of other concerns, it might signify a high level of distress.

The average score on secondary traumatic stress scale is 50 (SD 10; alpha scale reliability .81). Nearly 25% of individuals score below 43 and about 25% of people score above 57. If one's score is above 57, one might want to take some time to consider what is taking place at work that might be frightening or whether there is another reason for this score. While higher scores do not mean that one has an issue, this is perhaps a sign that the professional or participant might want to look at how he or she feels about their work and their environment.

3.6.2 Reliability and Validity of the Pro-QOL Scale

Previous researchers have indicated good validity for this measure (Bride et al. 2004; Figley 1995; Kadambi and Truscott 2004; Stamm et al 2002, 2008). There are several articles on compassion fatigue, burnout and secondary traumatic stress that have used the Pro-QOL scale (Arvey 2001; Pearlman and Saakvitne 1995; Robinson et al 2003).

The three scales determine separate constructs where the compassion fatigue scale is distinct. The inter-scale correlations indicate 2% shared variance ($r = .23$; $\text{co-}\sigma = 5\%$, $n = 1187$) with secondary traumatic stress; and 5% shared variance ($r = .14$; $\text{co-}\sigma = 2\%$; $n = 1187$) with burnout. While there is a shared variance between burnout and secondary traumatic stress, the two scales measure different constructs with the shared variance most likely revealing the distress that is common to both conditions. The shared variance between these two scales is 34% ($r = .58$; $\text{co-}\sigma = 34\%$; $n = 1187$). The scales both measure negative effect but are different; the

burnout scale does not take into account fear while the secondary traumatic stress scale does (Pro-QOL Manual 2010). For a more detailed explanation on scoring Pro-QOL see Pro-QOL Manual (2010).

3.7 The Secondary Traumatic Stress Scale

The Secondary Traumatic Stress Scale (STSS) was selected for the current study because it focuses on the secondary traumatic stress reactions such as intrusion, avoidance and arousal. These are known symptoms resulting from indirect exposure to traumatic situations that can occur while helping people who have directly experienced traumatic situations (Figley 1995). The Secondary Traumatic Stress Scale is a 17-item self-report scale that measures the frequency of intrusion, avoidance and arousal symptoms. Participants were instructed to read each item and indicate how true each statement was for them in the past seven days using a five-point Likert-type scale ranging from 1 (Never) to 5 (Very Often).

3.7.1 Calculating STSS Scores

Secondary traumatic stress is comprised of three subscales: Intrusion (items 2, 3, 6, 10 and 13); Avoidance (items 1, 5, 7, 9, 12, 14 and 17); and Arousal (items 4, 8, 11, 15 and 16). Scores for the full secondary traumatic stress (all items) and each subscale are obtained by adding up all the items in that subscale. Secondary traumatic stress differs from the many available PTSD measures in that the wording of instructions and the stems of stressor-specific items (items 2, 3, 6, 10, 12, 13, 14 and 17) were designed in such a way that traumatic stress was identified as exposure to clients/patients. Consistent with DSM-IV criteria for PTSD, other items are not stressor-specific (items 1, 4, 5, 7, 8, 9, 11, 15 and 16) but are characteristic of the negative effects of traumatic stress. To maintain congruence with DSM-IV (APA 1994), conceptualization of the characteristic symptoms of post-traumatic stress and associated features, such as distressing

emotions and functional impairment, were excluded from the item pool. It was further reasoned that taken together functional impairment and emotional distress might actually correspond to burnout, a related but conceptually distinct construct (Figley, 1995; Pearlman and Saakvitne 1995; Stamm 1997). Therefore, an initial pool of items for post-traumatic stress disorder was developed, based on the DSM-IV Criteria; B (Intrusion), C (Avoidance) and D (Arousal).

3.7.2 Reliability and Validity of the STSS

Mean, standard deviations and alpha levels for the secondary traumatic stress and its subscales were as follows: overall secondary traumatic stress scale ($M = 29.49$, $SD = 10.76$, $\alpha = .93$); Intrusion subscale ($M = 8.11$, $SD = 3.03$, $\alpha = .80$); Avoidance subscale ($M = 12.49$, $SD = 5.00$, $\alpha = .87$); and Arousal subscale ($M = 8.89$, $SD = 3.57$, $\alpha = .83$). Bride (2004) examined the convergent and discriminant validity of the scale. The scale showed to have a good convergent validity through the positive moderate to strong correlations of the overall scale and all of its subscales with measures of depression and anxiety. The discriminant validity was also good as the scale and all its subscales were uncorrelated with conceptually unrelated construct such as age, ethnicity and income.

Hoyle and Panter (1995) have focused on the question concerning validity of the secondary traumatic stress. Factor analysis of the Secondary Traumatic Stress Scale indicates that there are three main factors: Intrusion, Avoidance and Arousal. Examination of the squared multiple correlations (R^2) for each item assessed the extent to which the measurement model is adequately represented by the observed measures. As shown in Table 4.2, the R^2 values range from .33 to .63 for individual items, indicating that between 33% and 63% of the variance on individual items can be accounted for by the factor to which they are assigned. Moreover, factor inter-correlations (Intrusion-Avoidance = .737, $p < .001$; Intrusion-Arousal = .784, $p < .001$;

Avoidance-Arousal = .831, $p < .001$) are consistent with both the conceptualization of secondary traumatic stress comprising three related symptom domains and with other empirical investigations of traumatic stress symptoms (Foa, Riggs, Dancu and Rothbaum 1993). As such, the Secondary traumatic Stress Scale has good psychometric properties and adequately captures the construct in question.

3.8 The Impact of Event Scale

Clinical research (Horowitz 1976; Horowitz et al 1979) has revealed two common responses to stress – intrusion and avoidance. Intrusion focuses on ‘unbidden thoughts and images, troubled dreams, strong pangs or waves of feelings, and repetitive behaviour’ and avoidance focuses on ‘ideational constriction, denial of meanings and consequences of the event, blunted sensation, behavioural inhibition or counter-phobic activity, and awareness of emotional numbness’ (Horowitz et al. 1979). According to Horowitz (1976), intrusions and avoidances tend to fluctuate during the same time period. Avoidant behaviour often develops from the operation of unconscious control processes, and functions to restore emotional balance and wellness.

Horowitz’s Impact of Event Scale (IES) (Horowitz et al 1979) was developed for the study of bereaved individuals, but it was also used to assess the psychological impact of a variety of traumas. This scale is widely used in mental health research worldwide. It was constructed before the diagnosis of PTSD was entered into DSM-III (APA 1980). Although many measures of PTSD symptoms have emerged (Wilson and Keane 1997), the IES remains widely used. It is a short set of 15 self-reported questions that can measure the amount of emotional distress that one links to a particular event (Horowitz et al 1979). The measure was used in this study because previous research indicates that IES is valuable in detecting both trauma and less intense forms of stress. As such, the instrument is useful in measuring the emotional impact that a professional

experiences following a traumatic event and enabled the assessment of how much impact a traumatic event is currently having on participants.

3.8.1 Calculating the IES Scores

The IES measure contains optional responds that are 0 (Not at all), 1 (Rarely), 3 (Sometimes) and 5 (Often). Every item marked in the ‘not at all’ column is valued at 0. In the ‘rarely’ column each item is valued at 1. In the ‘sometimes’ column every item marked has a value of 3 and in the ‘often’ column each item is valued at 5. When scoring the final responses, each column is added and totalled in order to achieve the total stress score.

On the 15-item IES, scores can range from 0 to 75. The interpretation of the IES scores are as follows: 0–8 No Meaningful Impact; 9–25 Impact Event – one might be affected; 26–43 Powerful Impact Event – one is certainly affected; 44–75 Severe Impact Event – this is capable of altering one’s ability to function. Scores of 27 or more indicate that there is a 75% chance that the respondent has post-traumatic stress and those who do not have full PTSD may have partial PTSD or at least some of the symptoms and/or reactions (Horowitz 1979). If the score is 35 and above, this represents the best cut-off for a probable diagnosis of PTSD and the respondent should consider consulting a mental health professional who is skilled in treating such issues (Horowitz 1979; Reed 2006).

3.8.2 Reliability and Validity of the IES

Sixty-six studies (Horowitz et al. 1979) have previously analysed IES reliability and validity and findings from 40 of these studies were selected by various researchers on the basis of psychometric soundness and clinical relevance. In the original report on the IES (Horowitz et al. 1979), a scale showed good one-week test–retest reliabilities for the two subscales (0.87 and 0.79). Solomon and Mikulincer (1988) found that the scale had one-year test–retest reliabilities

of 0.56 and 0.74 respectively. Weiss and Marmar (1997) reported test–retest reliabilities for IES subscales based on two different samples. For the first sample, the average time since the event was 3.1 years and the time between measurements was 6 months. The second sample completed the IES 6 weeks after the event and follow-up was 6 months later. Test–retest reliability for the first sample was 0.57 for IES intrusion and 0.51 for IES avoidance; for the second sample, reliabilities were 0.94 and 0.89. These estimates of test–retest reliability show that the shorter time interval (< 0.6 weeks) between measurements in Horowitz et al (1979) and the second sample in Weiss & Marmar (1997) contributed to higher estimates of stability compared with the estimates obtained when a longer time interval was used (> 1 year). The IES is based on clinical investigations of psychological response to stressful events, and on Horowitz’s 1976 theory of stress response syndrome which indicates an understanding or explanation of how people carry on through trauma.

Sundin and Horowitz (2002) identified 10 studies that examined the IES’s two-factor structure based on data allocated subsequent to different events. In three out of 10 studies that successfully reproduced the intrusion and avoidance factors, a third factor was achieved, and this factor was labelled ‘emotional numbing’ (Foa et al 1995; Joseph et al 1994; McDonald 1997). Results from two more studies suggested an underlying structure with one factor only (Hendrix et al 1994; Weiss and Marmar 1997).

In the initial report on the IES (Horowitz et al. 1979), the correlation between IES intrusion and avoidance was 0.41. Mean correlation was 0.63, which suggested that the subscales measured somewhat different constructs from one another (i.e. each of them represented a different type of reaction in the face of stressful events). The moderate correlation between intrusion and avoidance obtained in a number of studies that used the IES is consistent with

Horowitz's 1976 prediction where he argues that people tend to present an oscillating pattern wherein intrusive symptoms are followed by avoidance. Horowitz (1976) also postulated that intrusive and avoidant symptoms will become less frequent over time as the implications of the stressor event are digested. Several studies reported results that are consistent with this assumption (e.g. Kelly and Whitton 1995; Sloan 1994). According to Horowitz (1976), strong avoidance of painful thoughts may reduce dreaded states; however, it may also prevent adaptation to traumatic experiences. This assumption was supported by several researchers – for example, McFarlane (1988) suggested that individuals who developed PTSD at eight months after trauma had reported more avoidance on the IES at four months after the event compared to those without PTSD.

Overall, the review of studies that have investigated the reliability and/or validity of the IES indicated that it is a psychometrically sound measure, and therefore it is suitable for use in clinical settings. Several studies (Horowitz et al 1984; Solomon and Kleinhaus 1996) showed that the IES discriminates between individuals with extreme and mild stress reactions but nonetheless studies of groups, such as bereaved individuals (e.g. Horowitz et al 1984) and war veterans (Solomon and Kleinhaus 1996), have shown that the IES can aid the clinician in identifying individuals who need treatment. Furthermore, the IES has been used in many psychopharmacological trials (e.g. Brady et al 1999; Davidson et al 1993; Frank et al 1988; Rothbaum et al 1996), and outcome studies (Chemtob et al 1997; Grisaru et al 1998; Horowitz et al. 1984; Tunis et al 1994), which yielded additional evidence as a measure of clinical relevance. All studies that utilized the original IES and the ones that used a little altered subscales indicated internal consistencies of a similar magnitude; all of them suggested that intrusion and avoidance subscales have good reliabilities and therefore each subscale measures a relatively homogeneous

construct. The fact that the correlation between the two subscales when averaged over 11 studies were moderate (0.63) suggested that intrusion and avoidance are separate constructs. The original intrusion and avoidance subscales shared approximately the same amount of variance as obtained when slightly altered scales were used, which indicates the stability of the IES.

3.9 Ethical Considerations

Ethical considerations include data protection, access to participation, and participant withdrawal, rights and protection. The current research has considered all of these ethical concerns (and employed London Metropolitan University research guidelines and BPS procedures) and has also specifically considered issues that are related to informed consent, confidentiality, avoidance of possible harm, and avoidance of deception and discomfort. The ethical considerations also covered briefing and debriefing, the role of the participants and the right to withdraw as well as legal rights. Furthermore, all participants provided a written consent form which they had to sign if they agreed to participate. Following the ethical guidelines on briefing, confidentiality, data protection and the right to withdraw from the study, the participants were given more in-depth details on the nature and purpose of the current study and its major aims. Additionally, the participants were also instructed to contact the researcher if they needed more information on this research project (see Appendices A–E).

Chapter Four

Results

4.0 Data Analysis

The hypotheses of this study were tested using correlation and regression analysis. The correlation analysis was mainly exploratory and therefore correlations were calculated separately for the practitioners who were exposed to the physical (direct) trauma (i.e. A&E doctors, A&E nurses, ambulance technicians); and for practitioners who were exposed to the psychological (indirect) trauma (i.e. social workers, counsellors, psychologists and psychiatrists). Further, the correlation coefficients between the main variables were also separately calculated for males and females. Additionally, for both males and females, the correlation coefficients were calculated for each type of trauma (i.e. physical trauma (direct trauma) and psychological trauma (indirect trauma)). The correlation coefficients for each pair of correlations were compared using Fisher r -to- z transformation to examine whether there were any significant differences in the strength of the relationship between different groups.

The hierarchical regression analysis was performed to test the main research hypotheses. For the purpose of running the regression analysis, nominal variables were dummy coded. Thus participants' professions were dummy coded with social workers being a reference group. Social workers were chosen as the reference group due to the likelihood of them being exposed to both (direct) secondary trauma and (indirect) secondary trauma in their profession. The gender variable was also dummy coded with males being a reference group.

The hierarchical regression was performed in three steps with the profession entered in Step 1 of the regression model to examine whether profession accounted for any variance in

secondary traumatic stress and its related symptoms and whether there were any differences between people in different professions in experiencing secondary traumatic stress and its associated symptoms and/or reactions. The background variables (i.e. gender and age) and years of work in the current profession were entered in Step 2 of the regression to see if they explained any additional variance in the experience of secondary traumatic stress and its related symptoms, and whether years of work was a stronger correlate of secondary traumatic stress symptoms than age was. In addition, Step 2 of hierarchical regression tested whether there were any gender differences. The interaction between years of work and profession, and years of work and gender were tested in Step 3 of the regression (i.e. testing the moderating effect of the profession on the relationship between years of work and secondary traumatic stress and its related symptoms). The interaction between gender and years of work were entered in the model to explore the moderating effect of years of work on the relationship between gender and secondary traumatic stress and its associated symptoms, even though there was no specific moderation hypothesis for gender.

4.1 Descriptive Statistics and Test of Mean Differences

The exploration of the differences in secondary traumatic stress symptoms in different professions was initially carried out using unrelated analysis of variance (ANOVA). Test of assumptions for unrelated ANOVA on each of the variables (compassion fatigue, burnout, compassion satisfaction, intrusion, avoidance, arousal and secondary traumatic stress) indicated that one of the key assumptions of equality of variances was violated for all of the study variables (with the exception of compassion fatigue), with Levene's test being significant – at least $< .05$ level. The transformation of the data and screening for the outliers did not result in any improvements to the equality of variances in each profession group and therefore ANOVA

was an inappropriate test to use on this data. As such, the results of the ANOVA output were unreliable. In order to avoid Type I Error, the non-parametric alternative to the unrelated ANOVA was employed to analyse differences in levels of secondary traumatic stress in each profession. Furthermore, a pair-wise comparison was done to examine more precisely where the difference lies. The level of significance was adjusted using Benferroni correction.

The descriptive statistics were calculated for each of the dependent variables and for each occupational group and are presented in Table 4.1a. In addition, the mean differences between all the groups were tested using the Kruskal-Wallis test and the pair-wise comparisons were done using Mann-Whitney U-test. The results of those tests are reported in Table 4.1b.

Table 4.1a Means and Standard Deviations for all of the Study Variables for Each Professional Group

Variable	A&E Doctor		A&E Nurse		Ambulance Technician		Counsellor		Psychiatrist		Psychologist		Social Worker	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
GHQ-30	43.1	30.8	35.6	14.9	38.3	19.3	47.5	26.3	32.8	15.2	29	14.4	32.7	12.1
Pro-QOL_CS	34.2	7.4	31.2	3.5	30.9	2.9	27.4	5.8	34.1	5.7	35.3	5.5	32	4
Pro-QOL_BRN	29	8.1	30.6	2.3	31.6	4.3	33.7	5.2	28.8	4.9	27.4	4.7	29.7	3.2
Pro-QOL_STSS	30.9	10	32.8	6.2	33.4	5.3	35.8	7.7	29.9	8.7	28.6	7.2	31.7	4.5
Pro-QOL_CF	94.1	11.6	94.5	10.3	95.9	7.5	96.8	8.3	92.7	10.2	91.3	8.5	93.4	7.4
IES	43.7	28.8	52	11.5	50.7	11.1	58.6	16.5	42.7	21.3	39.9	15.9	46.7	8.1
STSS_S1	15.2	6.5	16.8	2.4	17.9	3.7	19	4.7	14.1	5.3	13.9	3.9	15.5	2
STSS_S2	21.5	9.1	23.6	3.8	23.1	4.3	26.3	6.4	19.8	7.5	19.1	5.2	21	3.2
STSS_S3	15.6	6.6	17.3	2.9	18.9	4.2	19.3	4.7	15.6	5.2	14.9	4	15.6	2.5
STSS	52.3	22.1	57.7	8.9	59.9	11.6	64.6	15.8	49.6	17.6	47.9	12.9	52.2	7.4

GHQ-30 – General Health Questionnaire 30 (possible minimum score is 0 indicating no decline in general health and possible maximum score is 90 indicating severe decline in general health); Pro-QOL_CS – Professional Quality of Life Questionnaire _ Compassion Satisfaction Scale (possible minimum score is 10 indicating no compassion satisfaction and possible maximum score is 50 indicating highest levels of compassion satisfaction); Pro-QOL_BRN – Professional Quality of Life Questionnaire _ Burnout Scale (possible minimum score is 10 indicating no burnout and possible maximum score is 50 indicating severe burnout); Pro-QOL_STSS – Professional Quality of Life Questionnaire _ Secondary Traumatic Stress Scale (possible minimum score is 10 indicating no secondary traumatic stress and possible maximum score is 50 indicating severe secondary traumatic stress); Pro-QOL_CF – Professional Quality of Life Questionnaire _ Compassion Fatigue (possible minimum score is 30 indicating no compassion fatigue and possible maximum score is 150 indicating severe compassion fatigue); IES – Impact of Event Scale (possible minimum score is 0 indicating no emotional distress and possible maximum score is 75 indicating severe emotional distress); STSS_S1 – Secondary Traumatic Stress Scale_ Intrusion (possible minimum score is 5 indicating absence of intruding thoughts and possible maximum score is 25 indicating high levels of intrusive thoughts); STSS_S2 – Secondary Traumatic Stress Scale_ Avoidance (possible minimum score is 7 indicating no avoidant behaviour/thoughts and possible maximum is 35 indicating high levels of avoidant behaviour/thoughts); STSS_S3 – Secondary Traumatic Stress Scale _ Arousal (possible minimum score is 5 indicating low arousal and possible maximum is 25 indicating high levels of arousal); STSS – Secondary Traumatic Stress Scale Total (possible minimum score is 17 indicating no secondary traumatic stress and possible maximum is 85 indicating high levels of secondary traumatic stress)

Table 4.1b Kruskal-Wallis and Mann-Whitney U-test Results

	<i>GHQ30</i>	<i>Pro-QOL_CS</i>	<i>Pro-QOL_BRN</i>	<i>Pro-QOL_STSS</i>	<i>Pro-QOL_CF</i>	<i>IES</i>	<i>STSS_S1</i>	<i>STSS_S2</i>	<i>STSS_S3</i>	<i>STSS</i>
Kruskal-Wallis test	12.67*	38.50*	26.14*	14.71*	10.79	21.91*	32.70*	34.08*	24.23*	34.87*
A&E Doctor vs A&E Nurse	370	370	427.5	367	436	419.5	382.5	378.5	388	375.5
A&E Nurse vs Counsellor	441	246.5*	282.5	369.5	391.5	347.5	343.5	347	350.5	341
Counsellor vs Social Worker	355.5	203**	218*	288.5*	334	269*	255.5*	212*	279.5*	229*
Social Worker vs Psychiatrist	408.5	356.5	415	411.5	427	362	316	338	393.5	326.5
Psychiatrist vs Psychologist	353	397.5	394	429	414.5	431.5	437.5	446.5	436.5	433.5
Psychologist vs Amb.Tech.	288	231.5*	251.5*	290.5	281	280*	205*	236**	226.5*	206.5*
A&E Doctor vs Amb.Tech.	414.5	355.5	383.5	360	382	440.5	341	407	321.5	369
A&E Doctor vs Counsellor	427	226.5*	306	308.5	389.5	324	305	310.5	310	305
A&E Doctor vs Social Worker	346.5	411.5	439	413	436	419.5	447.5	417	446.5	435.5
A&E Doctor vs Psychiatrist	366	423.5	421.5	439	419	424	395.5	384.5	427	389
A&E Doctor vs Psychologist	331	391.5	379.5	414.5	384	384	382.5	359	405	376.5
A&E Nurse vs Social Worker	372	392.5	337.5	358.5	391	376.5	318.5	262.5*	339	283*
A&E Nurse vs Psychiatrist	355	301	331.5	361.5	391.5	300.5	260.5*	249**	313	248*
A&E Nurse vs Psychologist	333.5	250.5*	279	344	340.5	246.5*	237*	197.5**	274.5*	197.5**
A&E Nurse vs Amb.Tech.	435.5	413	392	397.5	361.5	401.5	390	397.5	352.5	431
Counsellor vs Psychiatrist	273*	153.5**	217.5*	290.5*	339	248.5*	217*	207.5*	258*	208.5*
Counsellor vs Psychologist	239.5*	127.5**	181**	269*	282*	202.5**	195.5**	163.5**	230*	167.5**
Counsellor vs Amb.Tech.	345.5	275.5*	345	297.5	447.5	306	403.5	312.5	430.5	353.5
Social Worker vs Psychologist	322	301	353.5	390.5	378.5	302.5	327.5	323.5	366.5	320
Social Worker vs Amb.Tech.	401.5	366.5	328.5	329	324.5	420.5	275*	323	266*	286.5
Psychiatrist vs Amb.Tech.	425.5	282*	311	327	328	330	229.5*	262.5*	269.5*	235.5*

* p < 0.05; ** p < 0.01 (2-tailed with Benferroni corrections)

As can be seen from Table 4.1a, participants reported, on average, morbidity on their general health ranging from 28 to 47.5, which indicates that they experienced some but not severe weakness in general health. The analysis of mean differences and pair-wise comparisons reported in Table 4.1b show that overall there was a significant difference between professions in their reported morbidity on general health. However, the pair-wise comparison identified that significant differences were only found between psychologists and counsellors, and psychiatrists and counsellors, where counsellors reported a much higher decline in their general health than psychologists and psychiatrists.

With regard to the professional quality of life, participants reported compassion satisfaction ranging between 27.4 and 35.3 across all seven occupational groups, which indicates that participants' derived average levels of pleasure from doing their work. The test of mean differences showed an overall significant difference between all seven groups. The pair-wise comparison furthermore revealed that psychologists, psychiatrists and A&E doctors on average reported significantly higher compassion satisfaction than counsellors and ambulance technicians. Participants across all seven groups also reported average levels of burnout ranging from 27.4 to 33.7. There was overall significant difference between all seven groups in their levels of burnout; however, pair-wise comparison revealed that psychologists and psychiatrists reported significantly less burnout than counsellors and ambulance technicians. Participants across all seven groups also reported average levels of secondary traumatic stress ranging from 28.6 to 35.8. Overall there was a significant difference in levels of secondary traumatic stress between the groups, but pair-wise comparison showed that only psychologists, psychiatrists and social workers reported significantly less secondary traumatic stress than counsellors. On the overall measure of compassion fatigue, the scores ranged across groups between 91.3 and 96.8,

but there was no overall significant difference. The pair-wise comparison, however, showed that psychologists reporting significantly less compassion fatigue than counsellors.

Examining emotional distress experienced at work, participants' responses across groups ranged between 39.9 and 58.6, indicating a larger spread between the occupational groups than was observed on other measures of secondary traumatic stress and its related symptoms. Overall there was significant difference between occupational groups in their levels of emotional distress. The pair-wise comparison showed that psychologists and social workers reported significantly lower levels of emotional distress in comparison with counsellors, A&E nurses and ambulance technicians.

Analysing the secondary traumatic stress scale, on the subscale of intrusion participants' scores across the occupational groups ranged between 13.9 and 17.9, and on the subscale of avoidance the scores ranged between 19.1 and 26.3, indicating that participants across groups experienced average levels of intrusive and avoidant thoughts and behaviour. Overall there was a significant difference between the occupational groups on their reported levels of intrusive and avoidant thoughts and behaviour. Pair-wise comparison showed that psychologists, psychiatrists and social workers reported significantly fewer intrusive and avoidant thoughts and behaviour than counsellors, ambulance technicians and A&E nurses. With regard to arousal, participants reported heightened levels of arousal across all seven occupational groups and their responses ranged between 14.9 and 19.3. There was also overall significant difference between occupational groups and pair-wise comparison revealed that psychologists, psychiatrists and social workers reported on average lower levels of arousal than counsellors and ambulance technicians. Similar results were obtained for the overall secondary traumatic stress scale. The overall responses across all occupational groups ranged between 47.9 and 64.4 indicating

experience of some secondary traumatic stress and there were significant differences between the groups. The results of the pair-wise comparison on the full secondary traumatic stress scale were very similar to the results on its three subscales and showed that psychologists, psychiatrists and social workers on average experience significantly less secondary traumatic stress than counsellors, A&E nurses and ambulance technicians.

4.2 Correlation Analysis

In order to analyse differences in the strength of the relationship between study variables, descriptive statistics, Cronbach's alphas and correlation coefficients were calculated and analysed separately for physical (direct) and psychological (indirect) trauma exposures and are presented in Table 4.2. Cronbach's alpha exceeded the .7 acceptable standard for all variables in both groups of participants.

The decrease in general health (measured by GHQ-30) showed modest negative correlation with years of work; people reported higher general health well-being the longer they had been in their current profession or employment. This relationship was observed in both groups of participants (physical trauma exposure and psychological trauma exposure).

Compassion satisfaction (measured by the Pro-QOL subscale) showed to be positively associated with years of work; people reported higher compassion satisfaction from helping other people the longer they had been in their current employment. Burnout (measured by Pro-QOL) negatively correlated with years of work; professionals reported lower levels of burnout the longer they had been in their current employment. The same relationship was observed with secondary traumatic stress and compassion fatigue (measured by Pro-QOL) and years of work; professionals reported lower levels of secondary traumatic stress and compassion fatigue the longer they had been in their current employment.

Table 4.2: Means, Standard Deviation, Cronbach's alpha, and Correlations between Study Variables Split by the Nature of Trauma Exposure

Variable	<i>X</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	<i>X</i>	<i>SD</i>
1. Years of work	13.47	8.56	-	.828**	-.486**	.451**	-.541**	-.481**	-	-.463**	-.511**	-.481**	-.465**	-.494**	11.09	7.93
2. Age	43.47	8.41	.685**	-	-.426**	.419**	-.49**	-.445**	-.422**	-.408**	-.458**	-.424**	-.379**	-.428**	39.67	8.68
3. GHQ-30	39.02	22.64	-.337**	-.273**	.99	-.541**	.660**	.612**	.384**	.632**	.728**	.732**	.692**	.732**	35.51	19.03
4. Pro-QOL_CS	32.11	5.2	.363**	.250*	-.568*	.84	-.844**	-.661**	.543**	-.713**	-.694**	-.680**	-.655**	-.689**	32.19	6.04
5. Pro-QOL_BRN	30.39	5.49	-.482**	-.283**	.724**	-.776**	.79	.893**	.377**	.828**	.849**	.847**	.817**	.853**	29.89	5.12
6. Pro-QOL_STSS	22.34	7.46	-.447**	-.264*	.708**	-.548**	.879**	.93	.776**	.828**	.849**	.847**	.817**	.853**	29.89	5.12
7. Pro-QOL_CF	94.84	9.9	-.413**	-.225*	.637**	-.319**	.809**	.953**	(.94)	.679**	.745**	.738**	.713**	.746**	93.58	8.8
8. IES	48.78	19.16	-.472**	-.306**	.684**	-.676**	.819**	.803**	.705**	.99	.911**	.905**	.901**	.921**	47	17.5
9. STSS_S1	16.62	4.62	-.478**	-.438**	.699**	-.608**	.812**	.813**	.744**	.840**	.97	.973**	.927**	.985**	15.63	4.64
10. STSS_S2	20.74	6.19	-.420**	-.359**	.707**	-.591**	.789**	.829**	.752**	.858**	.965**	.94	.938**	.991**	21.58	6.4
11. STSS_S3	17.28	4.97	-.489**	-.446**	.630**	-.586**	.823**	.807**	.757**	.813**	.958**	.919**	.97	.969**	16.35	4.56
12. STSS	56.64	15.5	-.467**	-.417**	.693**	-.606**	.821**	.832**	.765**	.854**	.991**	.982**	.973**	.99	53.56	15.34

Physical trauma (bottom left half of the table – black colour): n = 90; Psychological trauma (top right side of the table – grey colour): n = 120 (Alphas in parenthesis); '-' corresponding statistic cannot be estimated * $p < .05$ (1-tailed), ** $p < .01$ (1-tailed). GHQ-30 – General Health Questionnaire 30; Pro-QOL_CS – Professional Quality of Life Questionnaire _ Compassion Satisfaction Scale; Pro-QOL_BRN – Professional Quality of Life Questionnaire _ Burnout Scale; Pro-QOL_STSS – Professional Quality of Life Questionnaire _ Secondary Traumatic Stress Scale; Pro-QOL_CF – Professional Quality of Life Questionnaire _ Compassion Fatigue; IES – Impact of Event Scale; STSS_S1 – Secondary Traumatic Stress Scale _ Intrusion; STSS_S2 – Secondary Traumatic Stress Scale _ Avoidance; STSS_S3 – Secondary Traumatic Stress Scale _ Arousal. Pearson's r can vary in between -1 and + 1, with -1 showing a perfect negative linear relation, + 1 showing a perfect positive linear relation, and 0 showing no linear relation between two variables. Cohen's d effect size cut of point: small/weak = .10, medium/moderate = .30, large/strong = .50.

The amount of emotional distress that is associated with traumatic events (measured by IES) was negatively associated with years of employment; the professionals reported lower levels of emotional distress from exposure to trauma the longer they had been in their current employment. Intrusion, avoidance and arousal that arise as a result of traumatic events (measured by STSS) also showed negative correlation with years of employment in the current profession; the professionals reported less secondary traumatic stress symptoms (intrusion, avoidance, arousal and overall STS) the longer they had been in their current employment.

The relationships for all the study variables with years of work were stronger for psychological exposure groups (social workers, counsellors, psychologists and psychiatrists) with the correlation coefficients ranging from moderate $-.422$ to strong $-.541$, than for physical exposure groups (A&E doctors, A&E nurses and ambulance technicians) with correlation coefficients ranging from $-.337$ to $-.489$. However, the differences between correlation coefficients between indirect and direct trauma exposure groups were not significant. These findings indicate that professionals (A&E doctors, A&E nurses, ambulance technicians, counsellors, psychiatrists, psychologists and social workers) overall report less secondary traumatic stress and related symptoms the longer they work in their particular professional field.

The same analysis was done separately for male and female participants. Descriptive statistics, Cronbach's alphas and correlation coefficients were calculated for each of the variables and are presented in Table 4.3. Cronbach's alpha exceeded the $.7$ acceptable standard for all variables in both groups of participants.

The decrease in general health (measured by GHQ-30) showed modest negative correlation with years of work; both male and female professionals reported higher general health well-being the longer they had been in their current employment.

Compassion satisfaction from helping other people (measured by Pro-QOL) showed significant positive association with years of work; both male and female professionals reported higher compassion satisfaction from helping other people the longer they had been in their current employment. However, there was a significant difference in the strength of the relationship between male and female participants. Thus, the relationship between compassion satisfaction and years of employment was significantly stronger for male employees than female employees (Fisher r -to- $z = 2.54$, $p < .05$). The burnout (measured by Pro-QOL) was negatively correlated with years of work; for both males and females burnout decreased the longer they had been in their current employment. There was also a significant difference between male and female professionals in the strength of the relationship between burnout and years of employment; the relationship was stronger for male professionals (Fisher r -to- $z = -1.75$, $p < .05$). The negative relationship was also observed with secondary traumatic stress, compassion fatigue (measured by Pro-QOL) and years of employment in the current profession for both males and females and there was no significant difference in the direction or strength of the relationship between the two genders.

The amount of emotional distress associated with traumatic events (measured by IES) was negatively associated with years of employment in the current profession; for both males and females emotional distress from exposure to traumatic events or material decreased with years of work. Intrusion, avoidance and arousal from traumatic events (measured by STSS) also had negative correlation with years of employment in the current profession for both male and female professionals. There were no gender differences in the strength of the relationship between emotional distress, intrusion, avoidance, arousal, secondary traumatic stress and years of employment. Even though the relationships between years of employment and all variables

measuring components or symptoms of secondary traumatic stress were generally stronger for male participants than female participants, only in two instances were the relationships significantly stronger for males than for females (years of work and compassion satisfaction; years of work and burnout).

Table 4.3: Means, Standard Deviation, Cronbach's alpha and Correlations between Study Variables Split by Gender

Variable	<i>X</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	<i>X</i>	<i>SD</i>
1. Years of work	14.63	9.26	-	.829**	-.37**	.225**	-.381**	-.352**	.352**	-.318**	-.402**	-.328**	-.401**	-.377**	10.56	7.21
2. Age	43.85	10.1	.688**	-	-.326**	.308**	-.368**	-.288**	-.249**	-.278**	-.385**	-.301**	-.364**	-.349**	39.72	7.43
3. GHQ-30	29.94	15.32	-.368**	-.246*	.99 (.99)	-.58**	.745**	.689**	.613**	.637**	.735**	.723**	.686**	.726**	14.37	22.34
4. Pro-QOL_CS	34.18	5.74	.534**	.293**	-.384**	.87 (.86)	-.775**	-.547**	-.288**	-.569**	-.646**	-.643**	-.605**	-.642**	30.92	5.29
5. Pro-QOL_BRN	28.14	5.14	-.574**	-.304**	.517**	-.824**	.78 (.75)	.88**	.790**	.783**	.864**	.844**	.862**	.868**	31.32	5.0
6. Pro-QOL_STSS	29.33	6.52	-.533**	-.356**	.468**	-.665**	.883**	.91 (.95)	.947**	.794**	.852**	.833**	.834**	.851**	33.42	7.74
7. Pro-QOL_CF	91.64	7.91	-.425**	-.279**	.443**	-.358**	.779**	.915**	.92 (.93)	.723**	.768**	.744**	.775**	.772**	95.65	9.75
8. IES	40.95	19.3	-.517**	-.315**	.677**	-.788**	.845**	.786**	.625**	.99 (.97)	.884**	.895**	.87**	.898**	51.95	16.21
9. STSS_S1	14.44	4.41	-.491**	-.373**	.617**	-.601**	.742**	.747**	.661**	.853**	.96 (.97)	.97**	.953**	.988**	17.05	4.25
10. STSS_S2	19.96	5.75	-.506**	-.375**	.649**	-.574**	.742**	.771**	.701**	.858**	.964**	.94 (.95)	.944**	.989**	23.38	6.33
11. STSS_S3	15.45	4.65	-.466**	-.328**	.575**	-.587**	.729**	.705**	.628**	.836**	.914**	.894**	.94 (.95)	.978**	17.55	4.65
12. STSS	49.85	14.43	-.502**	-.369**	.632**	-.602**	.757**	.762**	.684**	.872**	.984**	.981**	.958**	.98 (.98)	57.98	15.29

Male (bottom left half of the table – black colour): n = 80; Female (top right side of the table – grey colour): n = 130 (Alphas in parenthesis); '-' corresponding statistic cannot be estimated; * $p < .05$ (1-tailed), ** $p < .01$ (1-tailed). GHQ-30 – General Health Questionnaire 30; Pro-QOL_CS – Professional Quality of Life Questionnaire _ Compassion Satisfaction Scale; Pro-QOL_BRN – Professional Quality of Life Questionnaire _ Burnout Scale; Pro-QOL_STSS – Professional Quality of Life Questionnaire _ Secondary Traumatic Stress Scale; Pro-QOL_CF – Professional Quality of Life Questionnaire _ Compassion Fatigue; IES – Impact of Event Scale; STSS_S1 – Secondary Traumatic Stress Scale _ Intrusion; STSS_S2 – Secondary Traumatic Stress Scale _ Avoidance; STSS_S3 – Secondary Traumatic Stress Scale _ Arousal. Pearson's r can vary in between -1 and + 1, with -1 showing a perfect negative linear relation, + 1 showing a perfect positive linear relation, and 0 showing no linear relation between two variables. Cohen's d effect size cut of point: small/weak = .10, medium/moderate = .30, large/strong = .50.

Furthermore, the data was separately analysed for male and female participants in two groups (physical and psychological trauma exposure). For female participants' descriptive statistics, Cronbach's alphas and correlation coefficients were calculated for each of the variables and are presented in Table 4.4. Cronbach's alpha exceeded the .7 acceptable standard for all variables in both groups of participants.

The decrease in general health (measured by GHQ-30) showed modest negative correlation with years of work; female professionals when exposed to both direct and indirect trauma reported higher general health well-being the longer they had been in their current employment. However, the relationship between general health and years of employment was significantly stronger for females who were exposed to psychological trauma than for females who were exposed to physical trauma (Fisher r -to- $z = 1.77$, $p < .05$).

Compassion satisfaction from helping other people (measured by Pro-QOL) showed positive association with years of work, but only for females who were exposed to psychological trauma and not for those who were exposed to physical trauma, and there was a significant difference in the strength of the relationship (Fisher r -to- $z = -2.05$, $p < .05$). The burnout (measured by Pro-QOL) was negatively correlated with years of work in both groups and the relationship was significantly stronger for those females who were exposed to psychological trauma (Fisher r -to- $z = 1.8$, $p < .05$). The significant negative correlation was also observed between secondary traumatic stress (measured by Pro-QOL) and years of work and between compassion fatigue (measured by Pro-QOL) and years of work; female professionals, when exposed to both direct and indirect trauma, showed reduction of the secondary traumatic stress levels and compassion fatigue the longer they had been in their current employment. There were no differences in the strength of the relationship between the two groups of females.

The amount of emotional distress that is associated with traumatic events or material (measured by IES) was negatively associated with years of employment in current profession. Intrusion, avoidance and arousal from traumatic events (measured by STSS) also had negative correlation with years of employment. There were no significant differences in the strength of the relationships between these variables and years of employment. In general the relationships for all these study variables were stronger for females in the psychological exposure group than in the physical exposure group, but only general health (Fisher r -to- $z = 1.77$, $p < .05$), compassion satisfaction (Fisher r -to- $z = -2.05$, $p < .05$) and burnout (Fisher r -to- $z = 1.8$, $p < .05$) were significantly stronger correlated to years of work in females who were exposed to psychological trauma rather than to physical trauma.

Table 4.4: Means, Standard Deviation, Cronbach's alpha and Correlations for Female Participants according to the Nature of Trauma Exposure.

Variable	<i>X</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	<i>X</i>	<i>SD</i>
1. Years of work	12.37	7.77		.878**	-.530**	.378**	-.533**	-.422**	-.399**	-.399**	-.489**	-.413**	-.488**	-.463**	9.18	6.47
2. Age	41.86	6.93	.764**	-	-.464**	.466**	-.525**	-.387**	-.314**	-.421**	-.500**	-.416**	-.454**	-.457**	38.11	7.42
3. GHQ-30	43.25	23.28	-.262*	-.217	.99	-.627**	.760**	.691**	.596**	.687**	.766**	.764**	.740**	.767**	39.94	21.64
4. Pro-QOL_CS	30.8	4.44	.026	.060	-.528**	.8	-.819**	-.609**	-.318**	-.622**	-.675**	-.672**	-.647**	-.674**	31	5.88
5. Pro-QOL_BRN	31.6	5.02	-.262*	-.210	.726**	-.718**	.75	.879**	.762**	.808**	.873**	.866**	.861**	.877**	31.09	5.
6. Pro-QOL_STSS	33.62	7.83	-.308*	-.186	.688**	-.454**	.883**	.95	.933**	.792**	.869**	.839**	.833**	.856**	33.27	7.72
7. Pro-QOL_CF	96.03	10.59	-.341**	-.212	.632**	-.257*	.826**	.968**	.93	.710**	.777**	.749**	.758**	.769**	95.36	9.14
8. IES	53.41	16.08	-.288*	-.147	.571**	-.488**	.749**	.800**	.742**	.98	.917**	.923**	.919**	.932**	50.84	16.32
9. STSS_S1	17.32	4.34	-.354**	-.277*	.695**	-.599**	.851**	.831**	.767**	.836**	.97	.971**	.952**	.986**	16.85	4.67
10. STSS_S2	23.73	5.96	-.275*	-.179	.672**	-.592**	.814**	.829**	.750**	.856**	.969**	.94	.962**	.993**	23.11	6.62
11. STSS_S3	17.89	4.59	-.362**	-.306*	.617**	-.543**	.863**	.838**	.801**	.803**	.955**	.919**	.97	.982**	17.28	4.70
12. STSS	58.94	14.64	-.331**	-.251*	.674**	-.589**	.855**	.847**	.785**	.849**	.992**	.984**	.972**	.98	57.24	15.81

Physical trauma (bottom left half of the table – black colour): n = 56; Psychological trauma (top right side of the table – grey colour): n = 74 (Alphas in parenthesis); ‘-’ corresponding statistic cannot be estimated; **p* < .05 (1-tailed), ** *p* < .01 (1-tailed). GHQ-30 – General Health Questionnaire 30; Pro-QOL_CS – Professional Quality of Life Questionnaire _ Compassion Satisfaction Scale; Pro-QOL_BRN – Professional Quality of Life Questionnaire _ Burnout Scale; Pro-QOL_STSS – Professional Quality of Life Questionnaire _ Secondary Traumatic Stress Scale; Pro-QOL_CF – Professional Quality of Life Questionnaire _ Compassion Fatigue; IES – Impact of Event Scale; STSS_S1 – Secondary Traumatic Stress Scale _ Intrusion; STSS_S2 – Secondary Traumatic Stress Scale _ Avoidance; STSS_S3 – Secondary Traumatic Stress Scale _ Arousal. Pearson's r can vary in between -1 and + 1, with -1 showing a perfect negative linear relation, + 1 showing a perfect positive linear relation, and 0 showing no linear relation between two variables. Cohen's d effect size cut of point: small/weak = .10, medium/moderate = .30, large/strong = .50.

The data were also separately analysed for male participants in two groups (physical and psychological trauma exposure). Descriptive statistics, Cronbach's alphas and correlation coefficients were calculated for each of the variables and are presented in Table 4.5. Cronbach's alpha exceeded the .7 acceptable standard for all variables in both groups of participants.

The decrease in general health (measured by GHQ-30) showed modest negative correlation with years of employment in the current profession; male professionals exposed to both psychological and physical traumas reported higher general health well-being the longer they had been working in their current profession. There were no differences in the strength of the relationship between general health and years of employment for the two groups of male professionals.

Compassion satisfaction (measured by Pro-QOL) showed positive association with years of employment. The burnout (measured by Pro-QOL) was negatively correlated with years of work. The same relationship was observed with secondary traumatic stress (measured by Pro-QOL) and years of work and compassion fatigue (measured by Pro-QOL), where the increase in years of current employment was associated with reduction in secondary traumatic stress levels and compassion fatigue. Although the correlation between all the variables measured by Pro-QOL was stronger for male professionals who were exposed to physical trauma, there were no significant differences in the strength of the relationships between the two groups of males.

The amount of emotional distress that is associated with traumatic events or material (measured by IES) was negatively associated with years of work in a profession. Intrusion, avoidance and arousal from traumatic events (measured by STSS) also showed strong negative correlation with years of employment in the profession. Thus, these relationships were observed in both groups of male professionals (those exposed to physical trauma and those exposed to

psychological trauma) and there were no significant differences in the strength of those relationships between the two groups of males.

Table 4.5: Means, Standard Deviation, Cronbach's alpha and Correlations for Male Participants, various variables and the Nature of Trauma Exposure

Variable	<i>X</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	<i>X</i>	<i>SD</i>
1. Years of work	15.26	9.56	-	.766**	-.385**	.442**	-.469**	-.470**	.368**	-.434**	-.446**	-.492**	-.358**	.453**	14.15	9.1
2. Age	46.12	9.96	.593**	-	-.344*	.293*	-.380**	-.458**	-.417**	-.314*	-.322*	-.364**	-.198	-.312*	42.17	9.98
3. GHQ-30	32.06	19.97	-.400**	-.257**	.99 (.98)	-.198	.271*	.200	.194	.475**	.513**	.519**	.446**	.513**	28.36	10.65
4. Pro-QOL_CS	34.26	5.67	.657**	.301*	-.567**	.86 (.88)	-.858**	-.687**	-.370**	-.797**	-.663**	-.630**	-.607**	-.655**	34.10	5.84
5. Pro-QOL_BRN	28.38	5.70	-.698**	-.252	.684**	-.798**	.81 (.75)	.895**	.755**	.824**	.756**	.765**	.686**	.764**	27.95	4.73
6. Pro-QOL_STSS	30.23	6.36	-.647**	-.294*	.702**	-.649**	.886**	.87 (.94)	.915**	.758**	.719**	.727**	.649**	.726**	28.65	6.61
7. Pro-QOL_CF	92.88	8.42	-.518**	.190	.611**	-.357*	.808**	.918**	.91 (93)	.570**	.598**	.636**	.535**	.615**	90.71	7.47
8. IES	41.14	21.50	-.612**	-.337*	.829**	-.788**	.865**	.841**	.690**	.99 (.98)	.899**	.876**	.869**	.911**	40.80	17.73
9. STSS_S1	15.47	4.88	-.590**	-.553**	.684**	-.577**	.744**	.785**	.708**	.842**	.98 (.93)	.971**	.854**	.977**	13.67	3.89
10. STSS_S2	21.11	6.30	-.564**	-.494**	.739**	-.541**	.731**	.824**	.753**	.865**	.956**	.94 (.93)	.864**	.984**	19.1	5.20
11. STSS_S3	16.26	5.45	-.605**	-.546**	.639**	-.605**	.772**	.776**	.701**	.829**	.961**	.917**	.97 (.9)	.933**	14.84	3.90
12. STSS	52.85	16.32	-.596**	-.539**	.704**	-.584**	.763**	.812**	.737**	.863**	.989**	.979**	.976**	.9 (.97)	47.63	12.57

Physical trauma (bottom left half of the table – black colour): n = 34; Psychological trauma (top right side of the table – grey colour): n = 46 (Alphas in parenthesis); '-' corresponding statistic cannot be estimated; **p* < .05 (1-tailed), ***p* < .01 (1-tailed). GHQ-30 – General Health Questionnaire 30; Pro-QOL_CS – Professional Quality of Life Questionnaire _ Compassion Satisfaction Scale; Pro-QOL_BRN – Professional Quality of Life Questionnaire _ Burnout Scale; Pro-QOL_STSS – Professional Quality of Life Questionnaire _ Secondary Traumatic Stress Scale; Pro-QOL_CF – Professional Quality of Life Questionnaire _ Compassion Fatigue; IES – Impact of Event Scale; STSS_S1 – Secondary Traumatic Stress Scale _ Intrusion; STSS_S2 – Secondary Traumatic Stress Scale _ Avoidance;

STSS_S3 – Secondary Traumatic Stress Scale _ Arousal. Pearson's r can vary in between -1 and $+1$, with -1 showing a perfect negative linear relation, $+1$ showing a perfect positive linear relation, and 0 showing no linear relation between two variables. Cohen's d effect size cut of point: small/weak = $.10$, medium/moderate = $.30$, large/strong = $.50$.

4.3 Hierarchical Regression Modelling

The main hypotheses were tested using hierarchical regression, in which dependent variables were general health well-being (GHQ-30); compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress (Pro-QOL); emotional impact of traumatic events measured (IES); and intrusion, avoidance and arousal from traumatic events (STSS). All the predictor variables were entered in three blocks. Thus, the participants' occupation was entered in the first block, participants' age, gender and years of work in the profession were entered in the second block and the interactions of occupation and years of work and interactions of gender and years of work were entered in the third block. Gender and profession were dummy coded where males and social workers were reference groups. The differences between professions were tested in Step 1 of the hierarchical regression and differences between males and females were tested in Step 2 of the hierarchical regression. According to Field (2013) and Howell (2009), when categorical variables are dummy coded the regression coefficient represents the mean difference. As such, testing mean differences using regression is equivalent to testing mean differences using any other general linear models test of mean differences that is based on t-distribution or F-distribution (Field 2013; Howell 2009). The results of the regression analysis are presented in Tables 4.6a and 4.6b.

Table 4.6a: Standardized Regression Coefficients and Coefficients of Determination of the Three-Step Hierarchical Regressions of Secondary Traumatic Stress

Predictor	Dependent variable														
	GHQ-30			Pro-QOL_CS			Pro-QOL_BRN			Pro-QOL_STSS			Pro-QOL_CF		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
A&E Doctor	.176*	.361**	.484**	.134	.037	-.253	-.047	.09	.377*	-.037	.102	.342	.025	.157	.337
A&E Nurse	.049	.084	-.057	-.054	-.052	.136	.055	.069	-.065	.05	.072	.083	.039	.066	.114
Counsellor	.25**	.228**	.518**	-.288**	-.268**	-.512**	.264**	.233**	.453**	.189*	.16*	.45**	.127	.099	.310
Psychiatrist	.001	.070	.044	.126	.102	-.011	-.064	-.032	.058	-.084	-.047	.076	-.028	.006	.088
Psychologist	-.063	.042	-.079	.202*	.153	.108	-.157	-.09	-.077	-.142	-.072	.034	-.082	-.016	.050
Ambulance Tech.	.094	.131	.326*	-.066	-.077	-.034	.122	.127	.2	.077	.084	.208	.092	.093	.261
Years of work	-	-.308**	-.156	-	.345**	.199	-	-.486**	-.267	-	-.433**	-.087	-	-.417**	-.100
Age	-	-.114	-.088	-	-.079	-.077	-	.09	.091	-	.043	.047	-	.038	.043
Gender	-	.201**	.307**	-	-.183**	-.118	-	.191**	.207	-	.161*	.203	-	.127	.211
YoW*A&E Doctor	-	-	-.199	-	-	.396	-	-	-.409	-	-	-.4	-	-	-.315
YoW*A&E Nurse	-	-	.166	-	-	-.204	-	-	.141	-	-	-.049	-	-	-.084
YoW*Counsellor	-	-	-.358**	-	-	.286*	-	-	-.258	-	-	-.333*	-	-	-.242
YoW*Psychiatrist	-	-	.008	-	-	.166	-	-	-.144	-	-	-.198	-	-	-.141
YoW*Psychologist	-	-	.114	-	-	.089	-	-	-.060	-	-	-.197	-	-	-.140
YoW*Ambulance Tech	-	-	-.239	-	-	-.049	-	-	-.087	-	-	-	-	-	-.193
YoW*Gender	-	-	-.166	-	-	-.019	-	-	-.074	-	-	-.091	-	-	-.128
R^2 (Step 1)	.084**	-	-	.192**	-	-	.133**	-	-	.084**	-	-	.035	-	-
R^2 Change (Step 2)	-	.208**	-	-	.13**	-	-	.229**	-	-	.195**	-	-	.171**	-
R^2 Change (Step 3)	-	-	.081**	-	-	.066**	-	-	.044*	-	-	.029	-	-	.019

Notes: n = 210. '-' means that the corresponding statistic cannot be estimated. * $p < .05$ (1-tailed), ** $p < .01$ (1-tailed).

GHQ-30 – General Health Questionnaire 30; Pro-QOL_CS – Professional Quality of Life Questionnaire _ Compassion Satisfaction Scale; Pro-QOL_BRN – Professional Quality of Life Questionnaire _ Burnout Scale; Pro-QOL_STSS – Professional Quality of Life Questionnaire _ Secondary Traumatic Stress Scale; Pro-QOL_CF – Professional Quality of Life Questionnaire _ Compassion Fatigue

Table 4.6b: Standardized Regression Coefficients and Coefficients of Determination of the Three-Step Hierarchical Regressions of Secondary Traumatic Stress

Predictor	Dependent variable														
	IES			STSS_S1			STSS_S2			STSS_S3			STSS		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
A&E Doctor	-.058	.067	.493**	-.023	.153	.387*	.026	.183*	.505**	-.002	.156	.441**	.003	.169*	.459**
A&E Nurse	.103	.113	.135	.096	.132	.125	.144	.179*	.226	.121	.16*	.18	.125	.162*	.186
Counsellor	.23**	.201**	.511**	.264**	.239**	.538**	.296**	.27**	.616**	.268**	.241**	.571**	.283**	.257**	.590**
Psychiatrist	-.076	-.047	.172	-.106	-.044	.14	-.067	-.016	.238	.000	.05	.2	-.059	-.004	.201
Psychologist	-.129	-.068	-.045	-.118	-.022	-.043	-.109	-.025	-.02	-.057	.027	.047	-.098	-.009	-.007
Ambulance Tech.	.077	.081	.218	.181*	.207**	.329*	.115	.131	.256	.246**	.259**	.402	.177*	.195*	.328*
Years of work	-	-.454**	-.069	-	-.346**	.001	-	-.359**	.058	-	-.362**	.03	-	-.363**	.033
Age	-	.091	.045	-	-.081	-.084	-	-.043	-.071	-	-.049	-.056	-	-.057	-.072
Gender	-	.181**	.134	-	.172**	.251*	-	.145*	.167	-	.125	.208	-	.15*	.208
YoW*A&E Doctor	-	-	-.61**	-	-	-.384	-	-	-.505*	-	-	-.458*	-	-	-.463*
YoW*A&E Nurse	-	-	-.068	-	-	-.018	-	-	-.097	-	-	-.054	-	-	-.062
YoW*Counsellor	-	-	-.346**	-	-	-.348**	-	-	-.395**	-	-	-.383**	-	-	-.384**
YoW*Psychiatrist	-	-	-.312	-	-	-.276	-	-	-.365*	-	-	-.234	-	-	-.304
YoW*Psychologist	-	-	-.088	-	-	-.036	-	-	-.074	-	-	-.093	-	-	-.070
YoW*Ambulance Tech	-	-	-.149	-	-	-.137	-	-	-.134	-	-	-.160	-	-	-.145
YoW*Gender	-	-	.01	-	-	-.136	-	-	-.069	-	-	-.145	-	-	-.114
R^2 (Step 1)	.107**	-	-	.146**	-	-	.134**	-	-	.12**	-	-	.133**	-	-
R^2 Change (Step 2)	-	.197**	-	-	.202**	-	-	.178**	-	-	.175**	-	-	.19**	-
R^2 Change (Step 3)	-	-	.062**	-	-	.047*	-	-	.059*	-	-	.048	-	-	.052*

Notes: n = 210. '-' means that the corresponding statistic cannot be estimated. * $p < .05$ (1-tailed), ** $p < .01$ (1-tailed).

IES – Impact of Event Scale; STSS_S1 – Secondary Traumatic Stress Scale_ Intrusion; STSS_S2 – Secondary Traumatic Stress Scale_ Avoidance; STSS_S3 – Secondary Traumatic Stress Scale_ Arousal; STSS – Secondary Traumatic Stress Scale Total

As shown in Tables 4.6a and 4.6b, Step 1 of the hierarchical regression revealed that being in an occupation where an individual is likely to experience secondary traumatic stress due to exposure to physical or psychological trauma accounted for a significant portion of variance in general health and well-being. In particular, the difference was observed between the levels of general health and well-being among A&E doctors and counsellors, who experienced significantly compromised levels of health and well-being in comparison to the reference group (social workers). All other professions showed no difference in levels of general health and well-being. Overall, Step 1 explained 8.4% of variance in general health and well-being across all occupational groups.

A somewhat similar picture was observed with the measure of compassion satisfaction, where Step 1 of the hierarchical regression explained significant portion of variance, 19.2%. In particular, counsellors experienced significantly less compassion satisfaction in relation to the reference group (social workers); whereas psychologists experienced more compassion satisfaction when compared to the reference group.

With regard to burnout and secondary traumatic stress (as measured by Pro-QOL), Step 1 of the hierarchical regression explained a significant portion of variance – 13.3% in burnout and 8.4% in secondary traumatic stress. Only counsellors reported significantly higher levels of burnout and secondary traumatic stress than the reference group. In contrast to burnout and secondary traumatic stress, Step 1 of the hierarchical regression explained a rather small and insignificant portion of variance in compassion fatigue – only 3.5%. Furthermore, none of the occupational groups differed in their experience of compassion fatigue from the reference group (social workers).

Further professions accounted for 10.7% of variance in emotional distress (as measured by IES). The difference in emotional distress was observed between counsellors and the reference group (social workers), with counsellors showing significantly higher levels of emotional distress.

Step 1 of the hierarchical regression also revealed that professions as variable accounted for 13.3% of variance in overall secondary traumatic stress, comprised of intrusion, arousal and avoidance. A difference in overall secondary stress symptoms was observed among counsellors and ambulance technicians in relation to the reference group (social workers). Counsellors and ambulance technicians experienced significantly more intrusion and arousal than the reference group, and counsellors also experienced significantly higher levels of avoidance.

Overall, hypothesis H1 which postulated that various professionals working with trauma survivors will experience different levels of secondary traumatic stress symptoms and reactions was partially supported.

In Tables 4.6a and 4.6b, Step 2 of the analysis showed that years of work in the profession, age and gender of the participants conjointly explained additional significant portions of variance (20.8%) in general health and well-being. In particular, years of work in the profession explained a significant decrease in the level of health and well-being, and female practitioners reported poorer health and well-being when compared with male practitioners.

Years of work experience in the profession, age and gender of the participants also conjointly explained an additional significant portion of variance in all four subscales of the Professional Quality of Life Scale – 13% in compassion satisfaction, 22.9% in burnout, 19.5% in secondary traumatic stress and 17.1% in compassion fatigue. There was also a significant difference between males and females with female practitioners experiencing significantly lower

compassion satisfaction, significantly higher levels of burnout and secondary traumatic stress than male practitioners. There was no gender difference in experience of compassion fatigue.

With regard to emotional distress, Step 2 of the hierarchical regression revealed that years of work in the profession, age and gender of the participants conjointly explained an additional 19.7% of variance. Thus, years of work reduced emotional distress and females experienced significantly higher levels of emotional distress than males.

Step 2 analysis of the hierarchical regression in addition showed that years of work in the profession, age and gender of the participants conjointly explained an additional significant portion of variance in overall secondary traumatic stress (19%), comprised of intrusion, arousal and avoidance. Thus, years of work in the profession led to a decrease in the levels of secondary traumatic stress symptoms and males showed significantly lower levels of secondary traumatic stress symptoms than females.

Overall, hypothesis H2 stating that there will be a difference between males and females in mental health and well-being, and in experiencing secondary traumatic stress symptoms and reactions was supported. Hypothesis H3, positing that years of work experience in a particular profession will predict the occurrence and levels of stress in such a way that the longer an individual is employed in the profession, the less secondary traumatic stress reactions will manifest, regardless of the age of the participants, was also supported.

Step 3 of the hierarchical regression analyses displayed the interaction of occupation and duration of employment in the profession, and gender and duration of employment in the profession; conjointly they accounted for an additional 8.1% of variance in general health well-being. In particular, there was a significant interaction between counsellors and years of employment compared to the reference group (social workers). There were no other significant

interactions between professions and years of work. The graphical representation of the interaction is presented in Figure 4.1. Furthermore, there was also no significant interaction between gender and years of employment and general health well-being.

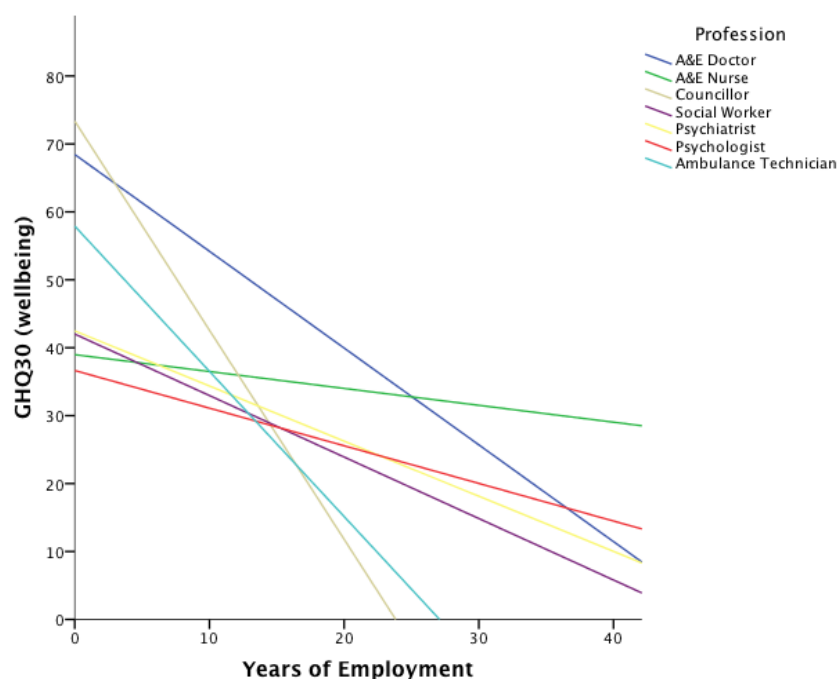


Figure 4.1: The interaction between years of employment and profession on general health and well-being (lower scores indicate higher well-being).

Step 3 of the hierarchical regression analysis accounted for an additional 6.6% of variance in compassion satisfaction and an additional 2.9% of variance in secondary traumatic stress (measured by Pro-QOL). There was a significant interaction between counsellors and years of work compared to the reference group in compassion satisfaction and in secondary traumatic stress symptoms. The graphical representation of the interaction is presented in Figure 4.2 for compassion satisfaction and in Figure 4.3 for secondary traumatic stress. Furthermore, there was

also no significant interaction between gender and years of employment and compassion satisfaction and secondary traumatic stress.

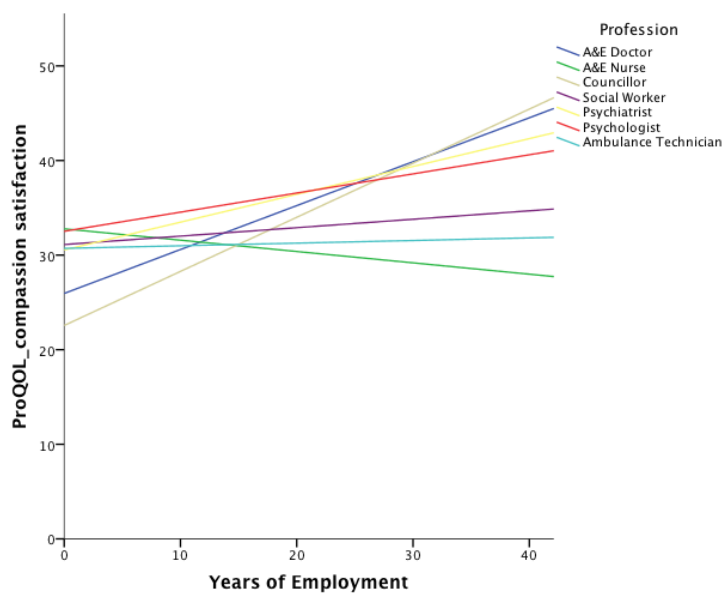


Figure 4.3: The interaction between years of employment and profession on compassion satisfaction.

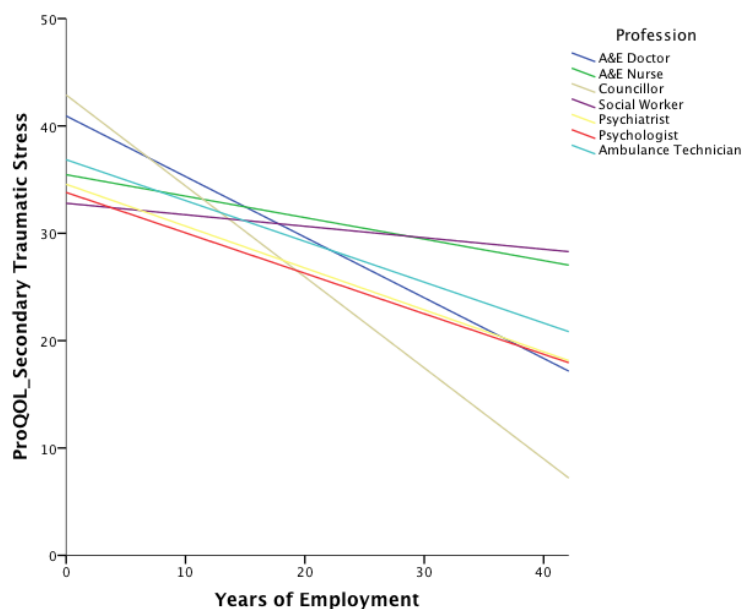


Figure 4.3: The interaction between years of employment and profession on experience of secondary traumatic stress.

With regard to burnout and compassion fatigue, the interactions of occupation and years of work in the profession, and gender and years of work in the profession were not significant and conjointly accounted for an additional significant 4.4% of variance in burnout, but only 1.9% of variance in compassion fatigue, which was not significant.

Step 3 of the hierarchical regression showed that the interaction of occupation and years of work in the profession, and gender and years of work in the profession conjointly accounted for an additional 6.2% of variance in emotional distress, which was significant. There was a significant interaction between A&E doctors, counsellors and years of work in comparison to the reference group (social workers). The graphical representation of the interaction is presented in Figure 4.4. There was no interaction between gender and years of work.

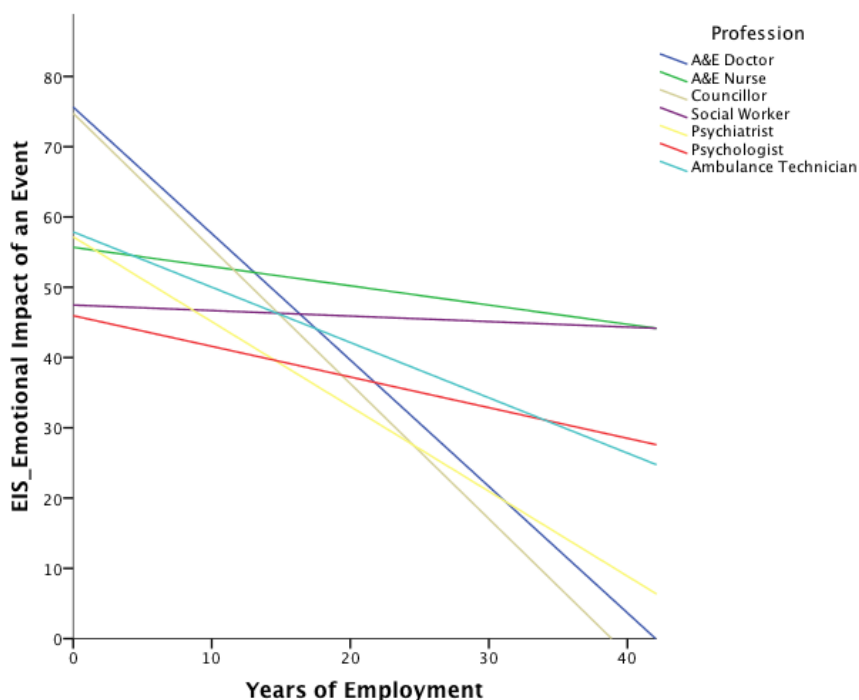


Figure 4.4: The interaction between years of employment and profession on emotional distress.

With regard to secondary traumatic stress symptoms, Step 3 of hierarchical regression showed that the interaction of occupation and years of work in the profession, and gender and years of work in the profession conjointly accounted for an additional 5.2% of variance in overall secondary traumatic stress symptoms, 4.7% in intrusion, 5.9% in avoidance and 4.8% in arousal. There were significant interactions between A&E doctors, counsellors and years of employment in that profession in comparison to the reference group (social workers) affecting levels of intrusion, avoidance and arousal. There was no interaction between gender and years of work affecting any secondary traumatic stress symptoms that were measured using STSS. The graphical representations of these interactions are presented in Figures 4.5a, 4.5b, 4.5c and 4.5d.

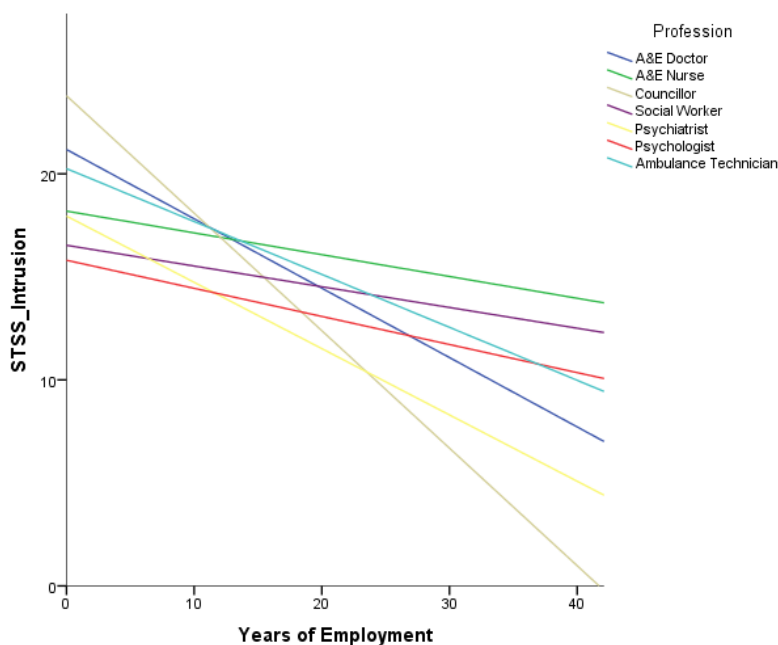


Figure 4.5a: The interaction between years of employment and profession on secondary traumatic stress – intrusion.

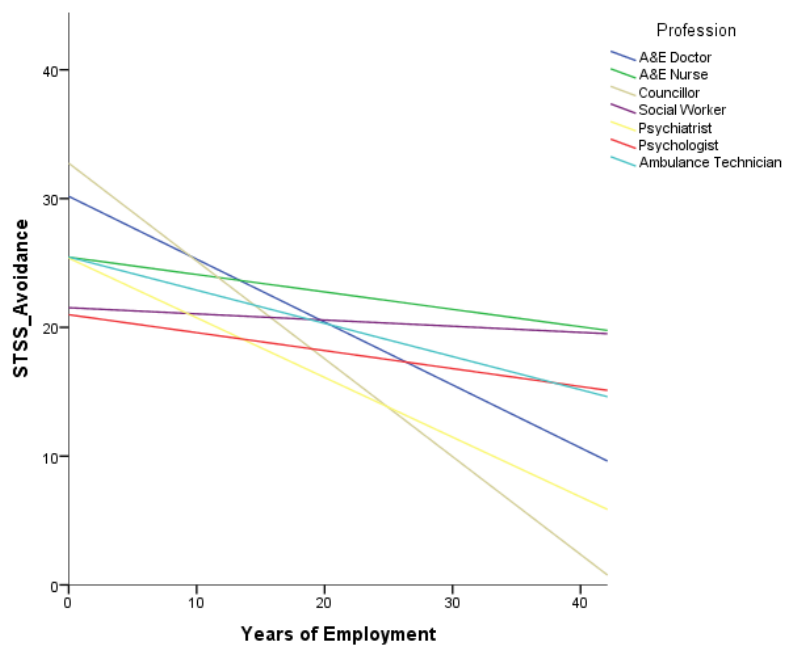


Figure 4.5b: The interaction between years of employment and profession on secondary traumatic stress – avoidance.

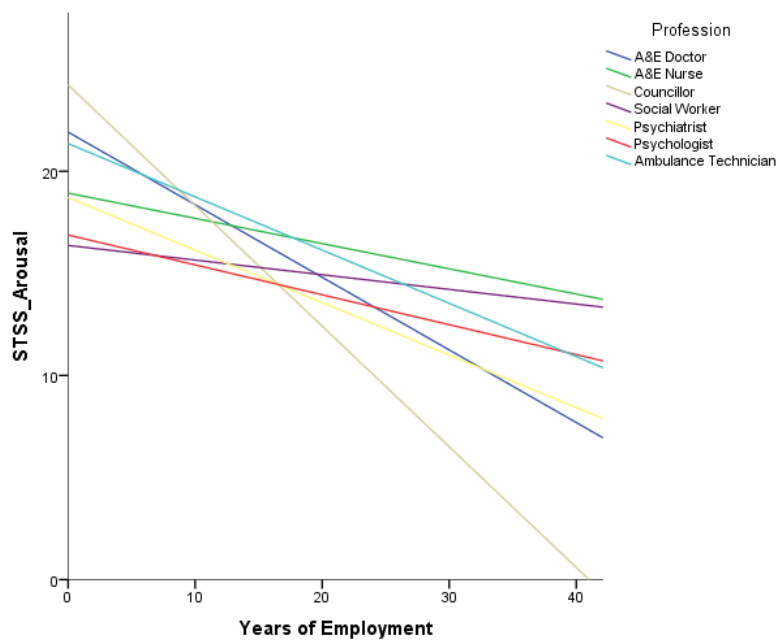


Figure 4.5c: The interaction between years of employment and profession on secondary traumatic stress – arousal.

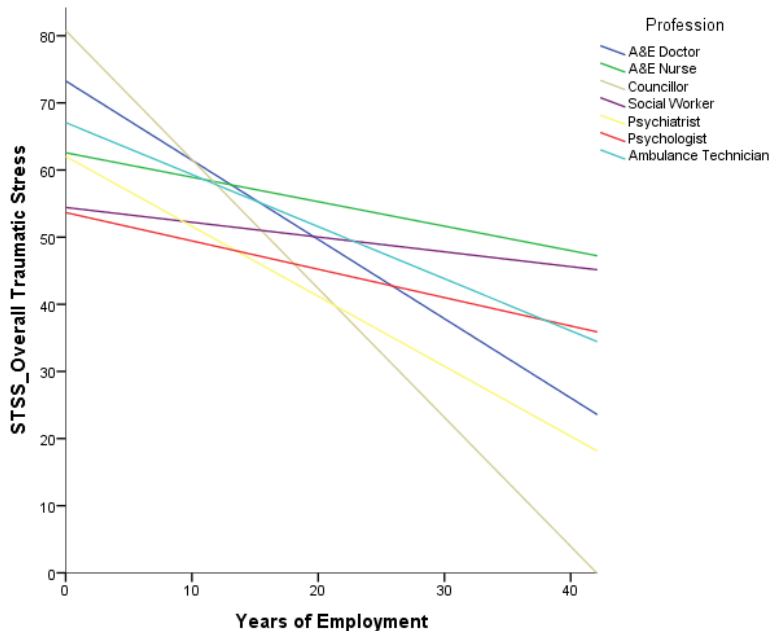


Figure 4.5d: The interaction between years of employment and profession on secondary traumatic stress – overall secondary traumatic stress.

Overall, hypothesis H4 which postulated that the profession will moderate the relationship between years of employment and levels of secondary traumatic stress and its related symptoms was largely supported.

Chapter Five

Discussion

5.0 Introduction

The past few decades have witnessed the involvement of several researchers in secondary traumatic stress (STS) research (e.g. Figley 1995; Saakvitne et al 2000). Relatively new publications tend to describe the symptoms that are manifested as an outcome of a professional's empathic contribution and/or reactions resulting from helping survivors and victims of trauma. STS reactions are almost identical to PTSD (Figley 1995), except that the professional's reactions (such as flashbacks) involve material from the survivor's trauma.

Several studies (Abendroth and Flannery 2006; Brosche 2003; Collins and Long 2003; Maytum et al 2004; Pfifferling and Gilley 2000; Sabo 2006; Schwam 1998) have suggested that there is a direct association between higher levels of secondary traumatic stress and lower levels of general health well-being; the above mentioned researchers have revealed that mental health workers reported symptoms such as insomnia, loss of appetite, irritability and difficulties in maintaining their personal daily lives and work duties. The main purpose of the current research was to explore the impact of exposure to secondary trauma on individuals working in the care professions. It is vital to comprehend the factors that might protect care providers from experiencing secondary traumatic stress and its related reactions. Furthermore, although literature on secondary traumatic stress has increased throughout the past few decades, very few empirical outcomes have determined the impact of compassion fatigue, burnout and secondary traumatic stress on performance (Abendroth and Flannery 2006; Collins and Long 2003); and indeed very few research studies have focused on ambulance technicians and accident and

emergency staff. Additionally, very few studies have differentiated and/or discussed the terminologies of secondary traumatic stress, including compassion fatigue, burnout and other related post-traumatic stress reactions.

The current investigation compared several professions and reactions of care providers to their involvement in traumatic events. Furthermore, compassion satisfaction was also examined among participants in order to determine the role it plays in decreasing secondary traumatic stress symptoms and reactions. In addition, the current study expected that there would be a difference between professions in their experiences of secondary traumatic stress symptoms. And, due to the current trends and societal changes, there is a growing awareness among healthcare professionals of the effects of exposure to traumatic events or material experienced in their work with traumatized clients and patients. Research in this area (Freedman et al 2004) continues to develop along with the establishment of training procedures to assist healthcare professionals when faced with occurrences of secondary traumatic stress and its associated symptoms.

Secondary trauma is a term that explains the increasing transformative effect of professionals and healthcare providers who are working with survivors of traumatic events (Arvay 2001; Bride 2003; Figley 1995). The aims of the present research work are therefore twofold. First, it is designed to examine the differences between the terms associated with post-traumatic stress disorder (PTSD) such as secondary traumatic stress (STS), compassion fatigue (CF) and burnout (BRN). The second aim is to investigate the impact of secondary traumatisation on healthcare professionals including compassion fatigue and burnout. The following questions are also considered in order to establish a comprehensive understanding of secondary traumatic stress and its related symptoms:

- (1) Do Accident and Emergency unit staff such as doctors, nurses and ambulance technicians who work with patients that experience physical injuries as opposed to professionals working with patients that have psychological trauma (i.e. counsellors, social workers, psychiatrists and psychologists) suffer different levels of PTSD reactions such as STS, CF and BRN, including intrusion, avoidance, arousal and emotional distress?
- (2) Do professionals of varied backgrounds including those of different gender, age and career experience differ from each other, particularly in their vulnerability to secondary traumatic stress and its associated components?
- (3) Does work experience and setting associate with manifestation of different symptoms of secondary traumatic stress?

5.1 Correlation Analysis of Proposed Questions

The main proposed questions of the current research were tested by facilitating correlation and regression analysis. The correlations were calculated individually for the practitioners who were exposed to physical (direct) trauma (i.e. A&E unit doctors, A&E unit nurses and ambulance technicians); and for practitioners who were exposed to psychological (indirect) trauma (i.e. social workers, counsellors, psychologists and psychiatrists); and the correlation coefficients between the main variables were also individually calculated for males and females. Furthermore, for both males and females the correlation coefficients were calculated for each type of trauma – physical trauma (direct trauma) and psychological trauma (indirect trauma). Results of this study suggested that professionals seem to report higher general health and well-being the longer they stay in their profession and/or employment. This relationship was observed in both groups of participants (physical trauma exposure and psychological trauma exposure).

Similar findings were found in CS meaning that compassion satisfaction is likely to increase with the years of employment in the profession. Results also indicated that an increase in years of employment resulted in decreased levels of burnout. The same relationship was observed with secondary traumatic stress and with compassion fatigue which suggested that an increase in years of employment in the current profession also resulted in reduction of secondary traumatic stress levels and levels of compassion fatigue.

The amount of emotional distress that is associated with traumatic events such as intrusion, avoidance and arousal also showed negative correlation with years of employment in the current profession, meaning that professionals who have long professional experience suffer no secondary traumatic stress symptoms such as intrusion, avoidance and arousal. These relationships were stronger for the psychological exposure group than for the physical exposure group. However, the differences between the two main groups were not significant. These findings indicate that people employed in professions where they are likely to experience physical and psychological (secondary) trauma become resilient to secondary traumatic stress and its related symptoms and reactions as they spend more time in the profession and/or work. Hence, longer exposure to traumatic events and material results in lower levels of secondary traumatic stress and its related symptoms and reactions. Gender differences and other results will be further highlighted in this chapter.

5.2 Tested Hypotheses

In general, the outcomes of the current research work provided support for various postulated hypotheses including H1, which indicated that working in a profession where a person is likely to be exposed to the physical (direct) or psychological (indirect) trauma will predict poor general health and well-being, as well as the manifestation of secondary traumatic stress symptoms

including compassion fatigue, burnout, intrusion and avoidance. This study has also predicted higher levels of emotional impact due to an exposure to traumatic events and materials. Furthermore, the result of this study also provided substantial support for the second hypothesis H2, which suggested that there will be significant differences between male and females on all the study variables contributing to secondary traumatic stress symptoms with the exception of compassion fatigue. However, there were gender differences observed in the main components of secondary traumatic stress, such as burnout, and overall secondary traumatic stress. As a result, females have shown significantly (higher) levels of secondary traumatic stress symptoms compared to their male colleagues.

More importantly, the results of the present research work further showed strong support for the third hypothesis H3, which predicted a decrease in secondary traumatic stress symptoms as staffs remain for longer periods in his/her profession. That is to say, years of employment predicted a reduction in secondary traumatic stress symptoms, signifying that resiliency to the traumatic events or materials is a utility of professional experience rather than resiliency developed throughout general life experiences. A profession as an investigated variable reported to have an overall moderating effect on the association between years of employment and secondary traumatic stress and its related symptoms. Thus, hypothesis H4 was also supported. Furthermore, the relationships for all the study variables were stronger for females in psychological (indirect) trauma exposure groups than in physical (direct) trauma exposure groups and three correlations (general health well-being, compassion satisfaction and burnout) reported to be significantly stronger for females in the psychological trauma exposure group. These outcomes were to some extent similar to those indicated earlier where the relationship with years of employment in a profession and secondary trauma stress and its related symptoms

were stronger for female professionals exposed to psychological trauma. These results suggested that professionals employed in roles where they are prone to experience indirect secondary traumatic stress become more resilient with time than those who experience direct secondary traumatic stress.

However, it is worth indicating that in both groups secondary traumatic stress reactions and overall secondary traumatic stress reduced with years of experience and prolonged employment in one's profession. The relationships for male participants for all the study variables were stronger in physical (direct) trauma exposure groups than for psychological (indirect) trauma exposure groups. However, the differences between correlation coefficients in the two groups were not significant. These outcomes stated that individuals employed in professions prone to secondary traumatic stress experiences and their associated reactions become resilient due to prolonged employment and experience in work, i.e. longer exposure to traumatic events and material.

Similar findings were reported in a sample of 328 New South Wales and 190 New Zealand acute care hospital nurses. Chang et al (2007) found that problem-focused coping was only mildly related to burnout. However, high levels of emotion-focused coping were strongly related to high burnout. Chang et al (2007) explored the workplace stressors, coping mechanisms and demographic characteristics which were the best predictors of physical and general mental health. Escape-avoidance (e.g. sleeping, drinking, smoking, using drugs), distancing (e.g. not taking things too seriously), and self-control (e.g. keeping feelings to oneself) emerged as the best coping predictors of burnout. Burnout scores were lower for nurses with more years of experience and for those who used distancing as a way of coping, but burnout was higher for

those who used escape-avoidance and self-control coping, lacked workplace support and had a high workload.

Furthermore, by investigating various coping strategies and years of experience in employment, Lim et al (2011) established that healthcare providers' mental health was associated with being or feeling appreciated, having consistent working relationships and health improvements of patients. The researcher indicated that factors such as professionals feeling appreciated at work, continuing to have reliable relationships at work and witnessing the progress of patients and clients all play a vital role in reducing reactions of burnout and enhancing resiliency in healthcare providers. Professionals' personal uplifts were associated with leisure activities, having disposable income, laughing with friends and spending time with friends and family. Other coping strategies included taking time out (short breaks at work, rest and relaxing activities), seeking emotional support (from family or colleagues) and belief systems (luck, fatalistic thinking and spirituality).

Mixed results have been found in research that has used direct measures of an individual's resilience. In a sample of 753 Australian theatre nurses, Gillespie et al (2009) investigated whether the personal characteristics of age, experience and education contributed to resilience. The resilience measure included elements of personal competence, trust in intuition, change and control appraisals and spiritual influences. Results demonstrated modest but statistically significant associations between age, years of experience and resilience. No relationship was found between education and resilience; however, longer years of experience predicted resilience in healthcare professionals.

Secondary traumatic stress studies suggest that a number of individual and contextual factors impact on helping professionals' resilience. These include age, gender, work-life balance,

personal and professional identity and quality of supervision support. However, what remains uncertain is whether these factors and resilience can be changed in healthcare providers. Carson, King and Papatraianou (2011) suggested that the ability to be resilient is linked to professional values and identity. Collins's (2008) research highlights the interaction of structural, organizational and individual differences in resilience. He recommends that education and training in resilience, the management of positive emotions and optimism might benefit both students and qualified healthcare providers, enabling them to cope more enthusiastically with work-related demands. In addition, the provision of on-going professional development, peer support, sensitive supervision and rest and recreation activities plays a vital role in decreasing burnout.

5.3 Healthcare Professionals Leaving Practice Due to the Negative Reactions of Secondary Traumatic Stress

Secondary Traumatic Stress reactions and/or symptoms have caused a massive increase in the number of nurses taking time off work because of stress as the National Health Service has struggled to handle the major increases of demand for care. Responses to freedom of information requests submitted to National Health Services by *The Guardian* have reported that both the number of nurses on stress-related leave and the amount of time taken off are up significantly in the past three years in London, Scotland and Wales. The figures and statistics declared by health unions report that the NHS's 400,000 nurses are being stretched to breaking point as a result of having to work more challenging and longer shifts. In London, almost 1,500 nurses at 31 NHS trusts took time off because of stress during 2014, up 27% on the 1,179 who did so in 2012. This means that one in every 29 nurses was off ill with stress. The 1,497 nurses took an average of 38 days off due to high levels of stress. Some nurses have reported suffering from anxiety or

depression rather than stress, as the NHS includes those conditions in its definition of stress-related leave. The number of nurses' working days lost to stress at the 28 acute trusts and three mental health trusts rose from 38,654 to 57,156 in 2015– a massive increase of 48%. The seven health boards in Wales have seen the number of nurses off with stress rise 17% from 2,188 to 2,563 in 2015. In the most severe cases, the nurses had an average of 51 days sickness leave. In addition, Scotland also reported stress-related sick days among nurses which increased by 34% from 116,735 in 2012 to 156,880 in 2011. The Royal College of Nursing which represents about 300,000 NHS nurses said they were 'being driven to breaking point' (<https://www.theguardian.com/society/2015/jan/17/nurses-nhs>)

It is likely that around 10% of the nursing workforce is seriously considering leaving work permanently and evidence shows that early signs of departure are strong predictors of the actual behaviour. Turnover toll is most likely to be higher in inner city hospitals and in specific branches of nursing such as mental health, critical care, oncology and care for the elderly. Even though a proportion of staff turnover can be positive, and introduce fresh ideas and improvements, high turnover can have a negative impact on patient care and create high costs for organizations and healthcare professionals, particularly if the professionals leave because of burnout. Newly qualified nurses and nurses approaching retirement age are more prone to leave their job (Heinen et al 2012). Job satisfaction, stress and burnout have also been discovered to have major associations with the intent to leave a job and the United Kingdom has one of the highest rates of nurses reporting burnout across Europe (Heinen et al 2012).

There are several risk factors linked with job dissatisfaction and stress which have been discussed in the current literature. Stress and burnout are above all high in young, newly qualified nurses, where turnover rates tend to be high in the first year after qualification and

remain high, or even rise during the second year of service before declining. This finding supports and adds further evidence to the outcomes of the current research, as it hypothesized that newer professionals in a particular field displayed higher rates of compassion fatigue or burnout.

Many of the factors influencing nurses' intentions to leave work can be altered in order to reduce the number of leavers. A nurse retention approach that incorporates various options outlined in the current research is likely to be successful in reducing turnover. Focusing efforts primarily around newly qualified nurses and specific branches with high turnover should be the first step. This could also enable organizations to evaluate which strategies are the most effective. This will be discussed in depth in the following section.

The term 'turnover' is utilized in previous literature to clarify the totality of nurse 'leavers' from an organization – this will include those moving within a sector (from one health trust to another), those moving between sectors (from nursing to non-nursing) and those leaving employment (due to ill health, retirement and so on). 'Wastage' refers only to those leavers who move outside of the organization. There are significant methodological challenges when attempting to measure and compare turnover. At the local level, the lack of consistency in how records of turnover are maintained presents difficulties, as the reliability of turnover determinations varies according to record keeping methods. The different definitions of turnover used in research also make it difficult to compare or generalize across studies. Voluntary and involuntary turnover is not always differentiated in studies because costs are incurred regardless of whether staff resigns or are asked to leave. Some studies define turnover as any job move while others consider nurse turnover as leaving the organization or even leaving the nursing profession (Hayes et al 2006). As well as variations in definitions limiting comparisons, it should

be noted that many of the studies on turnover have partial survey responses which may give an incomplete picture of turnover (Heinen et al 2012).

Many studies vary in their definition of 'intention to leave', and as a result they differ significantly in their conclusion of the proportion of nurses intending to leave; a review of international studies found between 4% and 54% intended to leave (Flinkman et al 2010). Central to the variation is the difference in the definition of intention to leave used, and the nature of the questioning. For example, if nurses are asked simply 'would you leave nursing if you could', a high proportion say they would (38%), whereas studies that use less leading questions find the figure to be around 10% (Heinen et al 2012).

Furthermore, there are an increasing proportion of nurses leaving the Nursing and Midwifery Council (NMC) register: 6.5% of nurses left the register between 2012 and 2013 – only 1.2% left due to retirement and 1.5% are known to have left voluntarily, while there is a lack of data on the remaining proportion. The actual number of nurses leaving is also likely to be higher than 6.5% as many leave while still registered and some will also move within the NHS, but to jobs away from direct clinical care. It should also be noted that in England the headcount of nurses registered with the NMC was 583,285 in 2011, with just over half of these, 323,377, in the NHS in 2011, meaning that 55% of registered nurses are not practising in the NHS. The Centre for Workforce Intelligence suggested that a 5% variance in the accuracy of the figures should be allowed for in the current economic climate (Health and Social Care Centre, 2011, 2012, 2013, 2014). However, it is unclear which nurses are working in the NHS, which are not, and how the proportion was arrived at.

A European study of nursing in 10 countries provides a useful insight into the proportion of UK nurses that intend to leave the profession. The study had responses from 46 hospitals in the

UK (covering 413 different units) and responses from 3,000 nurses, and found that 10% of them intended to leave the profession. The UK nurses' mean age was 39.7 years and 92% of them were female (Heinen et al 2012). Evidence shows that early signs of departure are strong predictors of the actual behaviour. A report on the nursing and midwifery workforce in 2001 found a similar proportion of nurses leaving the workforce – nursing 'wastage' (the total leaving excluding transfers to other NHS units as a percentage of staff in post) were 9.4% in England and Wales (Murrells et al 2008). A follow-on report in 2002 found nursing wastage was 8.7% in England, with significant variation between regions – the north-west had only 5.8% turnover compared to 13.6% in London. Other studies have also found geographic differences in turnover, with retention being a more pronounced problem in inner cities and teaching trusts, particularly in London, where some turnover rates have been found to range from 11% to 38% (Finlayson et al 2002).

Aside from problems in the nursing sector, the number of paramedics leaving the NHS each year has nearly doubled since 2011, according to figures from ambulance trusts. The data highlight that at least 1,015 paramedics left their job in 2013–14, compared with 593 in 2011–12 (Heath and Social Care Centre 2014). This is understood to be putting increased pressure on the remaining paramedics to meet demand. London has seen the largest increase in paramedics leaving with 223 departing in 2013–14, four times the number that left two years previously (Health and Social Care Centre 2014).

So, why do health professionals from different sectors leave? There have been a number of different models introduced to record health professionals' turnover and research has concluded several causes for nurses or other healthcare professionals leaving their jobs, suggesting that the motive behind turnover can depend on a variable number of risk factors, such as the work

environment, demographic variables and the individual's personal response to situations, all factors that are mentioned in the current research. One study in 2000/01 found that around 10% of leavers were retirements, 24% transferred to another trust, 5% went into non-NHS healthcare employment, 5% went into non-NHS employment, 24% left for other reasons (redundancy, career break, personal reasons), and 32% of leavers recorded no reason (Buchan 2002).

Research has previously highlighted that nurses aged between 35 and 39 and 60 and 64 are most likely to leave; the latter age group is likely to reflect nurses retiring (Buchan 2002). In a European nursing survey, 42% of UK nurses reported burnout (the highest of all 10 European countries surveyed), compared to the European average of 28% (Heinen et al 2012). As has been noted in the current research, healthcare professionals are trained to put the needs of others before themselves and spend each working day exposed to the emotional strain of dealing with people who are sick or dying, and who have extreme physical and/or emotional needs. This emotional strain, coupled with other stress factors inherent in the healthcare work environment, results in healthcare professionals being especially vulnerable to stress and burnout. It is believed that high levels of burnout have been documented in the healthcare professions, especially nursing. Furthermore, job dissatisfaction and/or compassion fatigue can lead directly to stress and burnout and is the compound reason that nurses leave.

Healthcare professional turnover can lead to both direct and indirect costs and benefits. It is important to acknowledge that some renewal of nursing or other healthcare staff can be viewed as beneficial to an organization; for example, if nurses move to jobs where they are better suited and perform to a higher standard, or if the opportunity is taken to rebalance skill sets and potentially reduce staff costs (Heinen et al 2012). At the clinical team level, high turnover can affect the morale of healthcare professionals and the productivity of those who remain to provide

care while new staff members are hired and orientated. Inadequate healthcare staffing levels caused by excessive turnover have been significantly associated with professional errors and poorer patient outcomes (Buchan 2002; Heinen et al 2012). One study reports that organizations with low turnover rates (ranging between 4% and 12%) had lower risk-adjusted mortality and lower patient lengths of stay compared to organizations with moderate (12% to 22%) or high (22% to 44%) turnover rates (Heinen et al 2012).

A variety of professional consequences are related to prolonged stress and burnout, and poor work performance is the ultimate result. Based on previous and current findings, it is evident that motional exhaustion, compassion fatigue and job dissatisfaction lead to absenteeism and decreased productivity, both of which affect work overload for other healthcare professionals and can compromise patient care. As a result, burned out professionals create distance between themselves and patients as well as colleagues (referred to as depersonalization), potentially decreasing the quality of care. Motivation is down, frustration is up, and an unsympathetic 'work to rule' attitude can predominate. There is then a high risk that burnt out healthcare professionals do not take enough care in making decisions or considering the outcome. In a broad sense burnt out healthcare workers do the minimum and are stale rather than innovative and fresh. It is believed that this decline in attitude and behaviour will associate with an increased incidence of errors in clinical care and will cause serious implications for the care and safety of patients.

It has been shown that personal costs, burnout, compassion fatigue, job dissatisfaction and stress are key factors in why healthcare professionals leave the profession and there are physical impacts on individuals such as headaches, insomnia, and cardiovascular and immune diseases. It can be noted that work-related stress that is left unaddressed has the potential to develop over a

long period of time into burnout – the personal costs of burnout are even higher than stress and affect not only the well-being of the individual and clinical team, but that of the individual's family, friends and colleagues.

What stops healthcare professionals leaving their jobs? One of the main conclusions of the recent research briefings on future healthcare professionals' workforce projections (Heinen et al 2012) is that there needs to be increased retention of new graduates and current staff, encouragement of older staff to delay retirement and encouragement of part-time staff to increase working hours closer to full-time quotas. However, many of the factors that have an impact on intention to leave could be modified to potentially reduce the number of leavers. Given the impact of stress and burnout on nurses leaving, the primary goal should be to stop the burnout cycle early by preventing the accumulation of stress. When implemented appropriately, preventing burnout is easier and more cost-effective than resolving it once it has occurred (Heinen et al 2012). The main key to retaining healthcare professionals is the development of a supportive work environment that prevents intention to leave the profession as well as actual leaving. In addition, being embedded in an organization is critical in reducing staff turnover – on a basic level, healthcare professionals who are psychologically engaged and actively involved in their organization report a lower intention to leave their current job (Heinen et al 2012).

As this research has indicated, turnover rates are higher for newly qualified healthcare professionals. It is less expensive to retain the healthcare professionals than to recruit and train new ones. Many healthcare providers struggle to fill vacancies and need to develop robust healthcare worker retention approaches to prevent further healthcare professionals leaving. Investing in improved nursing work environments is a key strategy to retain healthcare professionals. No single approach is likely to stop healthcare professionals leaving, but by

adopting a number of different options there are likely to be significant gains in retaining them. Further evaluation is needed to determine the most effective strategies for health sector staff retention.

5.4 Cultural Differences in the Consequences and Prevention of Secondary Traumatic Stress Symptoms

Studies (Collins and Long 2003) to detect work-related trauma and appropriate interventions are called for in places such as United Kingdom, India, Africa and Middle East, where workers not formally trained in mental health are thrust into situations where they have to provide psychological support. Collins and Long (2003) inadequately prepared workers who perform heroically at times on a daily basis may be at particular risk for secondary stress when they are responding to a mass disaster. It has been suggested that managers in charge of trauma services should select (recruit) and maintain (assign) their staff on the basis of psychological well-being and compassion satisfaction, hence thought to be protected against compassion fatigue

The STSS research instrument used in this study seems to confirm and expand STS concepts. People who come to the aid of others do experience negative consequences as a result of their work. This study significantly confirmed the finding that trauma appears to affect those of low general health and well-being more severely. However, this study did not measure whether the proximity to violence correlates to more traumas. There are several limitations to this study which will be discussed later in this chapter. The STSS has been validated for master's level, US professional 'social workers who work in one south-eastern state' (Bride et al 2004). It was not tested for other US caring professionals like para-professionals, nurses or psychiatrists. This study, therefore, applies the STSS to a new population. It assumes that the STSS detects traumatic stress accurately in other service providers who work with trauma and that the scale

can be applied trans-nationally and trans-culturally. The STSS awaits these broader validations by other investigators.

A further source of respondent pool mismatch may stem from endorsement factors that are culturally conditioned. The current sample contained many different ethical backgrounds – it is possible that certain professionals with, for instance, Indian or African origin may be more prone to recognize and endorse certain phenomena (‘Work intrusion, I know what that’s like’) or vice versa. The low reporting of nightmares in this study may stem from the fact that certain professionals are of different ethnicity and for that reason are not as open to the widely accepted notion in the United Kingdom that nightmares are reflective of confronting a frightening reality. Additionally, culture may differentially condition a person’s perception of shame with regard to particular symptoms. For instance, the acceptability of admitting ‘I feel like avoiding my clients’ may differ between UK and Indian participants. These hypothetical trans-national and trans-cultural variations reinforce the need for a control study where different cultures are compared and included when examining secondary traumatic stress. A study with controls or a comparison group from previous studies might help answer questions about whether untrained workers are more vulnerable to secondary traumatic stress.

The use of the STSS with one organization in the middle of the psychotherapeutic encounter may have resulted in more robust reporting of symptoms as a result of healthcare professionals learning about such symptoms during its educational encounter. It is unclear what impact the timing of administration may have had on STSS scoring. Ultimately, retesting and further consistency with similar groups are the only way to accurately establish the degree of traumatic stress the professionals sustained. A confounder for measuring STS is primary traumatic stress. Primary trauma could be (a) trauma from the distant past that becomes

reactivated, or (b) as a result of surviving the very trauma to which one then occupationally responds. This instrument did not inquire about distant past primary traumatic stress in the individuals. Although the STSS is worded to record only work-related symptoms, respondents may conflate their primary traumatic stress with their secondary traumatic stress symptoms. What may seem like misattribution may be a reflection of the mind's reality: primary trauma and secondary trauma interact and inform each other. Keeping these separate would be difficult for any respondent and such increased reporting should probably be assumed to play a part in any STS study.

Apart from primary traumatic stress augmenting the reporting of trauma, survivor guilt may play a part in magnifying STS. In the context of a mass disaster, workers and responders are among the survivors. They may push themselves to work excessive hours, neglect sleep and hunger and suppress grief, possibly to pay for the fact that they were fortunate enough to survive. They may not feel as though they deserve to live, but they continue to work in order to pay homage to the casualties. Professional social workers are typically taught the pitfalls of the rescue fantasy, in which an unconscious force motivates a helper to work against great odds to symbolically repair intrapersonal pain. Because this fantasy is common place in humanitarian work, its contribution to STS and/or burnout should be investigated.

Finally, reporting that some workers would be 'likely to meet the DSM-IV criteria for PTSD' is an inference that highlights a particular clustering of symptoms. The DSM-IV, although validated in other cultures, may still be strained in particular cultures and with particular diagnoses. Furthermore, reporting those who may qualify for PTSD has the consequence of de-emphasizing those who do not meet the criteria for PTSD but who may have substantial suffering and disorder in their lives. With the knowledge that the DSM-IV is designed

to be a statistically advantageous method for identifying disorder, sub-clinical PTSD ought to be taken seriously on a person-to-person basis.

This study highlights the human costs of humanitarian work; the constellations of symptoms that represent mental suffering and work dysfunction and the symptoms persisting well beyond the time of exposure. The data demonstrate elevated risk among workers, supporting the findings of previous studies (Baird and Jenkins 2003; Pearlman 1995). Given that every worker reported some combination of STS symptoms (whether low or high) looking only for PTSD and burnout would potentially miss significant psychological impact. Secondary Traumatic Stress of any order is costly, potentially translating to lower quality of life and work performance. For example, in a study conducted in India among humanitarian aid workers, nearly 40% met the criteria for PTSD and suffered a serious, substantially debilitating disorder (Shah 2006). Local and international agencies can use data on the extent, type and risk of secondary stress to humanitarian workers to develop policies protecting against worker morbidity and psychological de-compensation.

Rather than pathologizing the work or workers, further study of secondary trauma can hopefully improve the quality and accuracy of preventive services for service providers. Policy implications include (a) criteria by which healthcare professionals are recruited, (b) worker training and awareness-raising programmes, (c) increased encouragement (preferably policies) regarding rest and relaxation, and (d) planned and readily available counselling that is not provided as an afterthought (Downie 2002). Team leaders, managers, and agencies can integrate into their work culture the significance of work stress, ways to identify and alleviate stress, and resources for professional help. This study was designed to encourage the identification of those who suffer emotional difficulties and, as such, would benefit from treatment. Healthy

environments and appropriate treatment ensure that workers can continue to make significant contributions while maintaining high job satisfaction and quality of life, for as many years as desired.

The consequences of secondary traumatic stress symptoms due to factors such as major life events, working practices or aggressive environmental factors with patients or clients have received very little attention. There is, therefore, a considerable need for research to focus on additional factors that might contribute to secondary traumatic stress reactions. Such factors may include associated perceptions of death and injury, matters that emergency unit doctors, nurses, ambulance technicians and social workers experience in their daily lives. Concern about the death of others, witnessing or hearing about violence associated with environmentally destructive factors and natural disasters all influence the psychological functioning of a caring professional (Paoline, Lambert and Hogan 2006). There are many factors that might exert a powerful influence on the psychological well-being of a care provider, some of which include direct exposure to acts of violence, injury, harm, and other serious or destructive behaviours; indirect exposure to the same; working in life-threatening situations; or working alongside fellow professionals who have experienced any of these (Braga et al 2008).

Indeed, healthcare professionals might be traumatized through a single event or over a course of accumulated exposures to traumatic material. Different features of traumatic experience may trigger different psychological experiences. Braga et al (2008) have indicated that the most critical factors in assessing psychological impact are the actual situation, the victim's perception of the situation and the emotional response generated by the situation. The roles and responsibilities of healthcare providers also put professionals at more risk of psychological trauma (Braga et al 2008). The results of the present study indicate that healthcare

providers are constantly exposed to situations that have immense propensity for psychological trauma. Clearly, others factors might play a role in the degree to which these symptoms are experienced. These experiences might fluctuate based upon internal and external resources. Healthcare professionals can experience trauma on multiple levels (Saakvitne 2002) which may include direct trauma where they are directly affected by exposure to traumatic events. This finding is in line with the major conclusion of this study which concurs that male professionals dealing with a direct traumatizing situation are likely to display higher levels of secondary traumatic stress symptoms in comparison to male professionals dealing with indirect traumatizing situations.

These results confirm what the majority in the caring profession are aware of instinctively; there is a cost to caring no matter what the situation is. Working with a person who has experienced some kind of trauma might result in the caregiver not only experiencing possibly increased levels of secondary traumatic stress symptoms but also mild to profound changes in their general and mental well-being (see Abendroth and Flannery 2006; Brosche 2003; Collins and Long 2003; Figley 1995 ; Maytum et al 2004; Pfifferling and Gilley 2000; Sabo 2006; Schwam 1998). Furthermore, it is essential that helping professionals are educated and made aware of those possible changes in their mental well-being which are common and can be expected (Bride et al 2003). While this process can be extremely disorienting, the caregiver might find some comfort in knowing that other caregivers have had similar reactions, thereby normalizing the experience. This knowledge, together with a meaningful solution in self-care activities will help both the professionals and the primary victims.

The findings associated with hypothesis H3 suggest that the higher level of resiliency serves as protection against developing increased levels of secondary traumatic stress and its

related symptoms. For professionals involved in trauma matters, self-care measures can include activities such as regular exercise, debriefing with colleagues and taking part in prayer, meditation or spiritual activities. Research work has also suggested that mental and general well-being protects professionals from higher levels of secondary traumatic stress and its associated symptoms (Cunningham et al 2003). Hence it is vital for professionals to take into account their personal resources and take steps to make sure that they are regularly integrated in their daily routines. These processes must be more extensively and commonly acknowledged and normalized as essential aspects of self-care.

Figley (1995) stated on empathy that professionals empathize with victims and as a result they also experience some of the shock, disbelief and loss of sense of order and justice in the world, parallel to that of the patient or client, leading to a reduction in mental health and well-being. This could be the single most challenging aspect of trauma work, and therefore education and awareness on this subject is vital for professional training programmes, as well as caregiver support groups. However, financial cuts to many social and medical programmes and the high costs of maintaining professional assistance has led to increased community dependence on informal caregivers where voluntary individuals provide services both locally and internationally.

Indeed, it is evident that more research attention is needed to improve the understanding of associated risk factors, symptoms, protective factors and self-care practices that can help and guide professionals in prevention of serious secondary trauma. Any interventions that can take place will effectively support the professionals which will in turn benefit and protect the trauma survivors. Figley (1995) acknowledged that ‘the extent to which the helper is satisfied with his or her efforts (sense of achievement), and the extent to which the helper can distance himself or

herself from the ongoing misery of the victims(s), accounts for how much the helper experiences compassion stress' (p. 253).

It is important for caring professionals to be aware of two coping perspectives; an acceptance of uncontrollable problems as a reality of life and looking for positive meanings in negative life experiences (Wong 1998). Perhaps the extensive experience of the participants in the current research's survey led them to develop acts of distancing or separating themselves from the trauma of the victims. This process may involve finding alternative resources of mental well-being beyond the satisfaction derived from the act of helping. Further, it is vital that moderation analyses are conducted to completely comprehend the role of secondary traumatic stress on mental health and well-being. After all, it is the resiliency of our healthcare professionals that is most important and it is affected by the condition of their mental health and general well-being.

5.5 Associations between Secondary Traumatic Stress Symptoms and Professionals' Well-being.

The results of this research further support the use and development of scales like the Secondary Traumatic Stress Scale (Bride 2004) and the Impact of Event Scale (Horowitz 1979) and the measurement of the experiences of an extensive diversity of caregiving and helping professionals. Figley (1995) used the terms secondary traumatic stress and compassion fatigue interchangeably. The hierarchal regression analyses indicated that each of the measured concepts had a significant contribution to secondary traumatic stress; therefore it was decided that hierarchal regression analysis is vital in comprehending the contributions of each measured concept on secondary traumatic stress.

The possibility of moderating the effect of mental health well-being due to the way secondary traumatic stress impacts professionals was explored. It was found that individuals employed in professions where they were exposed to secondary traumatic stress become resilient to its symptoms as they spend more time in work (i.e. have a longer exposure to traumatic material) (Bride et al 2009). However, although it has been argued that most individuals will experience reductions in mental well-being when secondary traumatic stress reaches higher levels, such reductions appear to be much less profound for those with longer years of employment, indeed less than those who have recently started working within the profession (Von Rueden et al 2010). The current study revealed that being in a helping profession accounted for a significant portion of variance related to general health and well-being. In particular, A&E unit doctors and counsellors indicated to experience significantly less general health well-being when comparing them to the reference group (social workers).

Consistent findings have been indicated in quantitative studies regarding nurses' and doctors' demographic characteristics and their association to secondary traumatic stress symptoms. It is thought that lower well-being in doctors can depend on the fact that stress is a normal part of medical training and practice. For example, exposure to high-stress environments during training might improve future performance in emergency situations that require a doctor to make immediate decisions. Such exposure might teach physicians to prioritize tasks and manage multiple issues simultaneously. However, excessive work-related stress may impair performance and affect the professionals' general health well-being.

It is progressively more apparent that many trainees and clinicians such as doctors or counsellors suffer from unhealthy levels of distress, defined as physical, mental or emotional suffering. Studies have found increased levels of depression, anxiety and impaired mental health

among medical students relative to the general population (Thomas et al 2006). Similarly, studies of healthcare providers such as doctors, nurses and therapists in multiple specialties have uncovered epidemic low rates of general health well-being. For example, depression was common among professionals, with rates possibly exceeding 30% (Marshall et al 1987; West 2005). Burnout symptoms and low rates of well-being lead to decreased effectiveness at work among different healthcare providers (Thomas et al 2006). Such problems may persist and even get worse when physicians finish training and enter practice. Burnout rates of more than 60% have been reported among physicians in private practice (Shanafelt et al 2003). Furthermore, low rates of general health well-being have also been reported among academic department chairs and deans of colleges of medicine (Gabbe et al 2005). Low rates of well-being also remain prevalent among practising physicians, and the suicide rate among physicians may be up to six times that of the general population (Center et al 2003).

The relevant factors that relates to doctors' and counsellors' secondary traumatic stress symptoms identified in the current research can be due to several issues. For example, previous research work (examined in Chapters 1 and 2) indicated that loss of control over the practice environment is frequently cited as a contributing factor (see Linzer et al 2000; Shanafelt et al 2003). Other factors include a physician's workload, specialty choice and experience of suffering, death and medical errors (Shanafelt et al 2003; Thomas et al 2004 and West 2005). In addition, interpersonal relationships in the workplace can contribute to secondary traumatic stress symptoms. For example, a majority of medical students and other healthcare professionals report being mistreated by peers, educators and patients. This erodes humanistic attitudes and leads to the development of anger, cynicism and depression (Baldwin 1996; Ginsburg and Tregunno 2005). Personal factors such as debt, poor self-care, maladaptive coping strategies (e.g.

substance abuse) and stressful life events such as divorce may also lead to low well-being (Shanafelt et al 2003). It is thought that the potential for tension between personal and professional goals and responsibilities may also play a primary role in the attrition of doctors' and counsellors' mental health well-being. It has been proposed that personal well-being may actually enhance aspects of professionalism such as empathy, compassion and quality of care. These ideas are supported by a limited but emerging body of research using validated survey tools to show that increased well-being may promote professional attributes such as empathy and the ability to provide compassionate care (Shanafelt et al 2003; Thomas et al 2004). Concepts of mindfulness, self-awareness and positive psychology have been suggested as being important to promoting well-being, but little is known about the quantitative impact they may have on well-being or professionalism (Epstein et al 2003).

The link between secondary traumatic stress and general well-being is further clarified by theories on optimal human functioning suggesting that burnout and compassion fatigue represent only one end of a quality-of-life continuum. At the positive end of this continuum, well-being requires more than the absence of secondary traumatic stress and its related symptoms; it also involves satisfaction across multiple domains of life such as family, community, spirituality, health and experiences that stimulate personal and professional growth (Spilker 1996). Efforts to promote professionalism, therefore, not only must reduce secondary traumatic stress symptoms but also promote general health well-being. These relationships have led to a broader list of factors that contribute to healthcare providers' well-being and professionalism. Initiatives to promote professionalism will need to address the interactions among these factors to be effective. Reported approaches to fostering professionalism among healthcare providers include formal coursework in ethics and humanism, development of role models, compulsory community

service activities, and personal and shared reflection (Spilker 1996). Organizational reforms that promote a true culture of caring and institutional policies consistent with this goal are also necessary. For example, policies that promote work-life balance and restore professionals' autonomy within the practice environment are important in maintaining healthcare providers' well-being. Research has introduced effective methods for promoting well-being and professionalism that are important in helping to manage the secondary traumatic stress symptoms and reactions among healthcare providers. The trauma model CSST (constructive self-development theory) is to assist healthcare providers to manage secondary traumatic stress experiences.

To provide effective, compassionate and comprehensive end of life care, healthcare providers such as doctors, nurses and ambulance technicians must develop a level of comfort with death and dying. Unfortunately 'clinicians often do not have the skill, comfort level, and experience needed to care for dying patients' (Wessel and Garon 2005). As a result, healthcare providers may end up avoiding uncomfortable or difficult conversations with patients and family members and direct their attention towards more technical aspects of care. Consequently, all parties may lose out on an important opportunity to clarify their understanding and expectations of the current medical situation with a view towards developing effective end of life care.

Self-reflective practice is a proactive process which seeks to overcome this reluctance and to enhance relationships with particular people, events or situations. Reflection can take place not only retrospectively – thinking about an experience after it has occurred, but also simultaneously – as it is occurring, and even proactively – before it occurs (or is anticipated to occur), representing critical reflection before, during and after the experience. Being a reflective healthcare provider requires an 'in-the-moment' awareness of our own issues, attitudes, feelings,

values and beliefs, both personal and professional, around death and dying. Reflective practitioners are willing to explore and challenge their assumptions of themselves and others where appropriate (Wessel and Garon 2005). It may help to engage in this process with others on the team rather than exclusively on an individual basis.

Healthcare providers can become more critically reflective in their practice around end of life care by taking the following questions into account:

- What are the assumptions, feelings, values and beliefs guiding their current actions and behaviours?
- How are their actions and behaviours influenced by these assumptions?
- What do they know about the assumptions, feelings, values and beliefs of the patients and families with whom they are working?
- How might their actions and behaviours be influenced by these assumptions?
- What strategies have been and/or are working, and which strategies are not?

By developing and using reflective practice consistently, the professionals will be able to bring forward ideas to help improve and enhance end of life practice. Effective professionals reflect on their work throughout their careers. Although providing care to palliative patients and their families can be extremely rewarding, it can also be stressful and emotionally draining. Chronic exposure to related stresses and human suffering can lead to adverse physical, emotional, social and psychological effects (Keidel 2002). As it has been established in current and previous research this is referred to as burnout or compassion fatigue: 'Working with the dying and the bereaved touches caregivers in profound ways ... it makes them painfully aware of the losses in their own lives; it increases anxiety regarding their potential and future losses and it arouses existential anxiety in terms of their own death awareness' (Gibson 2003).

Over time, as healthcare providers are exposed to multiple deaths, they can become vulnerable to experiencing cumulative or disenfranchised grief. It is not uncommon for this grief to be denied, displaced and/or distorted (Marino 1998). Without adequate coping skills to deal with the exposure of working with patients and families at end of life, healthcare providers may begin to withdraw, have difficulty communicating and avoid emotional involvement with patients and families, all of which affect the quality of care they are able to provide (Egan and Labyak 2006).

It may be difficult to find encouragement to access outside forms of support due to the generalized culture of healthcare. However, it is essential that healthcare providers have the ability to identify the impact of their work and engage in efforts to recognize and address any negative consequences. The use of self-reflective practice, as described, can assist professionals in clarifying or identifying the source of any burnout or compassion fatigue. This can be done through a combination of self-reflection, education about the effects of caring, development of effective coping skills and the creation of a work culture that supports self-care (Marino 1998; White 2006). It may mean that professionals need to take more time for themselves, debrief with a trusted co-worker around a specific patient, or utilize an Employee and Family Assistance Program for counselling (Fraser Health 2002).

5.6 Years of Employment and Gender Differences

The interaction of occupation and years of work in profession, and gender and years of work in the profession conjointly explained 8.1% of variance; especially where counsellors reported a significantly better improvement in general health well-being as their years of work increased in their current profession. Townsend and Campbell (2009) reported similar findings – in secondary traumatic stress amongst nurses, a higher education and increasing age were protective factors;

and these findings are again consistent with the outcomes of this study in which it was suggested that years of work in the profession, age and gender of the participants conjointly explained a significant portion of variance (20.8%) for general health and well-being of professionals working in healthcare settings. It was found that longer years of work decreased levels of poor mental health and well-being. More interestingly, female practitioners indicated poorer mental health than male practitioners.

The outcomes regarding gender differences in the experience of general mental health well-being are in line with many previous studies which indicate that the female population report higher levels of secondary traumatic stress symptoms in comparison to males (Sprang et al. 2011). Research (Adams-Kassam 1999) has indicated that females are more prone to display their symptoms than males. Mejia (2005) examined the importance of gender-role socialization upon research participants when providing responses regarding their traumatic events and/or material; more specifically, Mejia examined the ideology of masculinity, self-concept, behaviours and coping skills in the manner and duration of disclosing the traumatic event or material, and also discussed the idea that masculinity and social norms associated with this role negatively limit the male individual's coping mechanisms and expression of emotions when applied to reactions of traumatic experiences.

Continuing professional education programmes can focus on secondary traumatic stress symptoms and mental health; and indeed can enhance professionals' resilience to this kind of stress. Workplace practices that do not acknowledge secondary traumatic stress and the factors associated with it must be eliminated. The importance of secondary traumatic stress reactions must be established and introduced to organizations and professionals. This enables all parties to maintain healthy and balanced mental health well-being (Figley 1998).

5.7 Compassion Satisfaction

Compassion satisfaction as described by Stamm (2002) is the satisfaction from one's job of helping others and has been pointed to as a probable protective factor against compassion fatigue (Collins and Long 2003; Stamm 2002). Compassion satisfaction was regarded as a vital marker by the researcher of this study because those participants that were not satisfied with helping others in their job reported lower levels of compassion satisfaction. This research's reported results of hierarchical regression suggested 19.2% of variance due to compassion satisfaction, where counsellors indicated to experience less compassion satisfaction in relation to the reference group (social workers) and psychologists indicated to experience more compassion satisfaction in comparison to the reference group. Interestingly, years of work in the profession, age and gender indicated an additional 13% of variance in compassion satisfaction; years of work particularly predicted a significant increase in compassion satisfaction where female practitioners displayed markedly lower compassion satisfaction than male practitioners. Notably, being female enhanced the risk of suffering from a lack of compassion satisfaction meaning that females are at greater risk of experiencing secondary traumatic stress symptoms. This current finding is consistent with the outcomes of Kassam-Adams (1999) and Meyers and Cornille (2002).

Female vulnerability to stress responses has been reported across several studies (Meldrum et al 2002; Pearlman and MacIain 1995; Wee and Meyers 2002). However, gender-role socialization and its influence on female vulnerability may play a part in the development of professional distress; hence a responder therefore wants to disclose their symptoms. This issue should be a vital consideration for future research and must be explored prior to any definite conclusions being made about gender role in the development of secondary traumatic stress

symptoms such as compassion fatigue and burnout. Further, the current research also revealed that the interaction of occupation and years of work in the profession, and gender and years of work in profession accounted for an additional 6.6% of variance. More interestingly, counsellors reported a significant growth in compassion satisfaction as they continued to work in their profession in comparison to the reference group (social workers). However, this was no different from all other occupational groups. These findings suggest that there is a significant negative relationship with secondary traumatic stress symptoms and years of employment meaning that an increase in years of employment is associated with a reduction in secondary traumatic stress symptoms, such as compassion fatigue and burnout.

Furthermore, the current data state that the majority of the study sample appeared satisfied with the way they provided help towards patients and clients, which explains the reductions in secondary traumatic stress reactions such as burnout and compassion fatigue. Consistent with the current research, compassion satisfaction has been previously correlated with lower levels of secondary traumatic stress symptoms. Many studies have identified an inverse relationship between compassion satisfaction and secondary traumatic stress (Flanagan and Flanagan 2002; McCarty et al 2009). As compassion satisfaction increases, secondary traumatic stress symptoms related to work decrease (Flanagan and Flanagan 2002). As a result, it was also reported that compassion satisfaction was revealed to exert the most robust effect on experiences of secondary traumatic stress symptoms among emergency officers.

Compassion satisfaction has also been negatively and significantly associated (Lambert 2008) with turnover, job performance, absenteeism, disciplinary problems and quality of service delivery. There have also been some studies reporting that compassion satisfaction among correctional officers also contributes to life satisfaction. In a study of 160 correctional officers in

a prison in the United States, Lambert et al (2010) found a significant positive relationship between compassion satisfaction and life satisfaction. These findings have been consistent throughout the literature. Compassion satisfaction seems to be one of the most important predictors of secondary traumatic stress symptoms; that is, people with greater levels of compassion satisfaction experience lower levels of stress and they are possibly also less susceptible to the experience of secondary traumatic stress. Moreover, researchers have discovered that the most essential predictors of compassion satisfaction among correctional staff include relationships with supervisors and efficacy with inmates (McCarty et al 2007). The more correctional officers feel supported by their supervisors and the better relationship they have with their inmates, the more improved outlook they have on their job function.

Lambert and Hogan (2009) conducted a study that further supported this notion. Lambert and colleagues reported that correctional officers with higher levels of compassion satisfaction were more dedicated to the care of inmates and appeared to be more concerned with their rehabilitation. Overall, compassion satisfaction appears to be one of the strongest predictors of secondary traumatic stress and the overall work experience of the caring professions.

5.8 Compassion Fatigue

The past twenty years have seen a rise in research linking exposure to pain, suffering and trauma among health professionals providing care to patients (Abendroth and Flannery 2006; Pearlman and Saakvitne 1995a; Sabo 2006, 2010). Researchers have also suggested that the phenomenon is associated with the therapeutic relationship between the healthcare provider and patient, in that the traumatic or suffering experience of the patient triggers a response, on multiple levels, in the provider. In particular, an individual's capacity for empathy and ability to engage, or enter into, a therapeutic relationship is considered to be central to compassion fatigue. Theorists have argued

that individuals who exhibit high levels of empathy and empathic response to a patient's pain, suffering or traumatic experience are more vulnerable to experiencing compassion fatigue (Adams, et al 2008; Figley and Boscrino 2008).

As indicated throughout the research, the aim of this study was to examine the influence of secondary traumatic stress on the work of professionals employed in the caring professions. The data of this study indicated that they do not display a high amount of compassion fatigue as reported by previous studies (Adams et al 2008; Bride et al 2007; Sprang et al 2007). Indeed, participants were not experiencing compassion fatigue but rather compassion satisfaction. These outcomes may have been influenced by the fact that the majority of the participants indicated low levels of secondary traumatic stress symptoms and they reported low risk of burnout. These current findings were in line with research conducted among probation officers in Sacramento in the United States. The researcher in Sacramento (Sachs 2010) included 48 probation officers in the study and found that the participants did not demonstrate high scores of compassion fatigue.

Other studies have investigated severe exposure effects among health providers following traumatic situations such as the Oklahoma City bombing (Creamer and Liddle 2005; Wee and Meyers 2002) or chronic exposure to high levels of traumatic situations among providers whose work is focused mainly on groups such as sexual violence survivors (Schauben and Frazier 1995). Based on frequency estimates in the literature, the current study scores on compassion fatigue subscales are much lower than the scores reported by other studies (Figley 1995; Meldrum et al 2002; Wee and Meyers 2002). The current study revealed that compassion fatigue from exposure to direct or indirect trauma only accounted for 3.5% of variance, meaning that profession choice did not play a role in levels of compassion fatigue. There was also no difference in levels of compassion fatigue between different groups that represented various

professions. However, in similar research which included hospice nurses, nearly 27% of the participants were in the high compassion fatigue category (Abendroth and Flannery 2006). Furthermore, the hierarchical regression analysis also indicated that years of work, age and gender of the sample accounted for 17.1% of variance of compassion fatigue. More interestingly, duration of work in certain professions indicated a substantial decrease in the levels of compassion fatigue.

As highlighted in the results of current research, work related traumatic exposure does not mean that a professional will definitely manifest reactions of compassion fatigue (Valent 2002). Also, pursuing the negative aspects components of secondary traumatic stress does not give answers to why and how certain healthcare professionals can maintain job satisfaction from the same job that can enhance compassion fatigue in other professionals (Abendroth and Flannery 2006; Sabo 2010). In light of these results, more thorough research is needed to investigate both nature and roles of the association between professional, patient and family, and empathy versus other related factors such as the saviour syndrome and engagement in the psycho-social health and well-being of healthcare providers, and whether the consequences various for professionals working in different specialties.

Additionally, there was no difference observed in the levels of compassion fatigue experienced between male and female practitioners. The results also displayed a variance of 1.9% when looking at the interaction of occupation and years of work. These results suggest that working in any particular profession had no effect on the levels of compassion fatigue as the time of working increased.

Other factors that may need to be explored include resilience and hope which may prevent the development of compassion fatigue allowing health providers to experience positive effects

from their caring work. For example, hope may influence actions that individuals take, as well as foster and support relationships (Simpson 2005). Building on this idea, a shared meaning of hope between nurse and patient may not only enhance the quality of the relationship but also satisfaction with the caring work. Resilience is defined by Walsh (2007) as the capacity to move forward in a positive way from negative, traumatic, or stressful experiences. It has been shown to enhance relationships, facilitate emotional insight, and decrease vulnerability to adverse effects from the work environment (Jackson et al 2007).

Furthermore, the role of gender in the development of compassion fatigue has been vague and limited due to an over-representation of female respondents. It was not surprising to discover that the majority of the respondents in the current research were females and they accounted for 61.9% of the total sample. Bride's (2007) research on the prevalence of secondary traumatic stress among social workers also included female participants (81.9% of the sample). Bride does not give any reason for this; however, one thought is that the social service field has attracted a larger female deputation. Another idea worth considering is that female clinicians are more likely to indicate trauma reactions than their male counterparts (Kassam-Adams 1999).

5.9 Burnout

This study reported that work-related stressors such as burnout and being new to the profession are best predicted of counsellors' distress where the hierarchical regression explained 13.3% variance. A very interesting result suggested that counsellors in the current study sample had significantly higher levels of burnout when compared to other reference groups (social workers). Previous literature (Miller and McGowen 2000; Robinson 2003) has reflected on several studies that have already reported high incidence of various conditions such as depression, substance misuse, lethality, and interpersonal issues among counsellors and therapists. Possible factors

leading to burnout can be classified according to personality characteristics, work-related attitudes and work or organizational practices. Researchers such as Miller and McGowen (2000) and Sonneck and Wagner (1996) suggested individuals with type A personalities (escape-avoidance, problem solving and confrontation) and individuals with “big five” (neuroticism, extroversion, openness to experience, agreeableness and thoroughness) are more likely to experience burnout. Nevertheless, these personality traits have yet to be fully clarified (Schaufeli and Enzmann 1998). The big five describes personality traits rather than a theoretical model (Goldberg 1990). These characteristics take place in groupings in many people but such characteristics are not always existent together. It is possible that some traits may incline individuals to higher risk for developing stress. Nevertheless, further examinations are imperative to determine if a causal connection occurs. Furthermore, work-related attitudes, such as the professional’s idealistic expectations, have been observed to play a role in the development of burnout (Laschinger and Finegan 2005; Leiter 2005). For instance, counsellors’ prospect to help and succeed with every patient is unrealistic and could cause the counsellors’ stress when they realize that they cannot meet their expected goals. Moreover, irregularity between counsellors’ values and beliefs in how to care for patient, and their organization’s vision and values could intensify the risks for burnout. Additionally, features that could play a role in burnout involve work-related and organizational appearances. Instances include job-related stressors such as increased patient-to-counsellor ratios; patient-related stressors such as increased patient acuity and complexity; social support factors such as level of education and collaborative practice offered, and leader/peer support; and degree of autonomy like capability to keep control over decision making at the point of care and counsellors’ contribution into changes associated to unit-based care delivery within the work environment (Schaufeli and Enzmann 1998).

Job-related and client-related factors are related with job demands while social support and autonomy factors are thought potential resources. Even though several theoretical frameworks described burnout, including individual, interpersonal, organizational, and societal frameworks, researchers state that the most reasonable clarification is established in workplace or organizational environment (Schaufeli and Enzmann 1998). Progressively, research supports the conception that burnout is developed through a mismatch between the individual and the job (Leiter and Laschinger 2006; Maslach and Leiter 1997). Early research examined the relationship between the healthcare professionals and care receiver as a essential component in the progress of burnout. In particular, the relationship was observed to cause emotional fatigue which was considered as the cause of burnout. However, as research has moved from descriptive to inferential approaches, outcomes from studies have stated that this association was not the main cause to burnout (Lee and Ashforth 1996 and Leiter 1993). Investigations currently support six work-life problems involving person-job discrepancy as the most likely explanation for burnout. These problems are work overload, lack of control, lack of reward, lack of community, lack of fairness, and value conflict (Leiter and Laschinger 2006; Leiter and Maslach 2004; Maslach and Leiter 1997).

More interestingly, years of work in the profession, and age and gender of the participants explained an additional 22.9% of the variance. Especially, years of work in the profession showed a significant decrease in burnout, and female health providers indicated higher levels of burnout than male practitioners. Other findings have suggested higher rates of burnout among female participants. For example, gender and social support within the area of secondary traumatic stress was the focus of Andrews et al (2003) study. Their research claimed that women have a higher risk of developing secondary traumatic stress symptoms despite the levels and

benefits of support received from family and friends. Andrews and colleagues argued that women suffer more depression and psychological distress because their social role exposes them to more stressors and social conflict. In addition, women are further exposed to trauma due in part to the negative response and support received from social networks and exposure to stress. Perhaps in the case of trauma, gender can moderate the relationship between support and distress. Additionally, Kassam-Adams (1999) and Meyers and Cornille (2002) found that female gender displayed higher indications of suffering from burnout than males.

The interaction of occupation and years of work in the profession, and gender and years of work in the profession accounted for only 14.4% of the variance. However, Abendroth and Flannery (2006) included hospice nurses in their research and found that nearly 10% of them were in the high level of burnout category. Additionally, the same study reported that nearly 90% of nurses indicated moderate to high levels of burnout which is much higher than the figure reported in the current study. The reason for this might be due to the voluntary nature of the current sample included in the study. Sachs (2010) reported that 88% of his study sample exhibited a risk of possible burnout. In addition, only 8% of Sachs's study sample indicated a low risk of experiencing burnout – these results are somewhat similar to the current outcomes of the present research.

Compassion fatigue and secondary traumatic stress have both been linked to the eventual manifestation of job burnout (Maslach and Jackson 1981). Furthermore, burnout has been extensively investigated in the caring professions amongst social workers and law enforcement officers (Etzion 1984; Miller 2007; Perron and Hiltz 2006; Little et al 1997; Sprang, Clark and Whit-Woosley 2007; Woody 2006). Due to the fact that the participants in the current research did not demonstrate a very high tendency of experiencing negative attitudes, feelings and/or

emotional states towards their clients/patients, they were not predicated as having a very high risk for experiencing burnout. These outcomes might have been affected by the fact that participants in the current study also indicated a low risk of experiencing the effects of secondary traumatic stress.

These findings are similar to other previously conducted studies that included caring professionals (Little et al 1997; Miller 2007; Sprang, Clark and Whit-Woosley 2007; Woody 2006). The fact that the majority of the study sample indicated low levels of compassion fatigue may be directly associated with the low level of job burnout among study participants. This may be because the study participants are satisfied with their ability to empathize with and assist the clients they serve. However, the most important factor in reduced levels of burnout in the current study was the length of years of work in the current profession.

5.10 Intrusion, Avoidance and Arousal

Focusing on secondary traumatic stress, the hierarchical regression analysis of this study has revealed that an individual is likely to experience intrusion, avoidance and arousal associated with trauma due to exposure to physical or psychological traumatic events or material and it accounted for 13.3% of variance. Thus, both counsellors and ambulance technicians exhibited significantly higher secondary traumatic stress symptoms which include intrusion, avoidance and arousal levels than reference group (social workers). Ambulance technicians' and counsellors' responses on secondary traumatic stress symptoms were higher than any other professional groups. This finding is in line with previous studies conducted by several authors (Andersen 1991; Clohessy 1999; Helps 1997). These researchers supported the conclusion that emergency staff and workers are at risk of developing post-traumatic stress symptoms, even if they are not exposed to major disasters. For example, ambulance personnel endure high daily stress and are

repeatedly exposed to human suffering and death. Many ambulance technicians have to cope with deaths, grief and events outside the normal range of human experience.

Jonsson, Segesten and Mattson (2003) noted that about two-thirds of their study sample indicated post-traumatic stress reactions or symptoms and the vast majority (86%) of those were stress situations in relation to trauma at work. Post-traumatic stress reactions reported by the ambulance technicians in the current study are the consequences of regular daily duties – stress reactions are part of their daily routine work (Davidson 1991 and Ravencroft 1994). Several similar studies have revealed that everyday work can lead to post-traumatic stress symptoms among caring professionals (Bunkhold 1996 and Davidson 1991).

It is important to note that ambulance technicians are working in an extensive range of settings and environments – including the provision of emergency medical services and taking care of chronically ill citizens – and they are exposed to different types of stressors. On active duty they are, however, constantly exposed to trauma-associated stimuli. It is believed ambulance workers who have been traumatized by stressful stimuli will not avoid further stimulus unless they quit the profession, take leave of absence, or are transferred to a non-emergency duty station. The most vital aspects of secondary traumatic stress reactions are continuous exposure, intensity and duration of trauma (Hodgkinson and Stewart 1991; McFarlane 1992; Mitchell and Bray 1990). The current research found that the number of years in ambulance duty was the most valid factor related to the occurrence of secondary traumatic symptoms where longer years of work decreased the levels of secondary traumatic stress symptoms.

Additionally, in recent years the ambulance organizations have become aware of the nature of stressful emergency work and the necessity of having an organization for debriefing and

defusing in order to reduce the levels of secondary traumatic stress reactions. Some previous studies have reported that access to a debriefing and defusing organization for all ambulance workers did not contribute to a difference in prevalence of post-traumatic stress symptoms when compared with other emergency organizations (Bunkhold 1996; Clohessy and Ehlers, 1999; Mitchell 1990). This fact highlights the important need for a deeper understanding of the psychological outcome of ambulance technicians' work. Their almost daily traumatic work and lack of coping strategies might account for stress symptoms and other mental and physiological illnesses. This outcome is in line with James and Wright's (1999) research which highlighted that background stressors such as shift work and time pressure may be one aspect contributing to the likelihood of overall secondary traumatic stress.

Some of the ambulance personnel and counsellors might have symptoms that are the result of a series of events called prolonged exposure duration stress disorder (Wessley et al 2000). Information regarding secondary traumatic stress symptoms has to be extended among management and personnel to increase awareness of secondary traumatic stress reactions and the consequences that follow them. Management has to identify those who suffer from secondary traumatic stress and take action accordingly. Some professionals, in this case ambulance technicians and counsellors, might have such high secondary traumatic stress levels that they actually need professional counselling. To avoid or reduce future symptoms it might be possible to take a leave of absence from work or to be transferred to non-emergency duty or to low-profile cases (Wessley et al 2000).

Analysing years of work in the profession in this study showed a decrease in the levels of intrusion, avoidance and arousal where the interactions of occupation and years of work in the profession, and gender and years of work in the profession conjointly accounted for an additional

significant 5.2% of variance. In particular, emergency unit doctors and counsellors displayed the most decrease in secondary traumatic stress symptoms of intrusion, avoidance and arousal as they worked longer in their profession than other occupational groups in relation to the reference group (social workers). This means that being new to the profession predicted symptoms of secondary traumatic stress. Similar findings were presented by Pearlman and MacIain's (1995) study that suggested that new therapists are more likely to experience secondary traumatic stress symptoms. It is believed that this is most likely because they have less experience and a lower sense of self-efficacy than a more experienced therapist.

Additionally, there was a difference in secondary traumatic stress symptoms of intrusion, avoidance and arousal associated with traumatic events and materials between males and females, with females showing higher levels of symptoms. These findings are consistent with the outcomes noted by Freedman et al (2004). Freedman found female participants were more prone than their male counterparts to experience daily intrusion, avoidance or arousal of thoughts and feelings (males 25.0% vs. females 56.4%). Symptoms such as avoidance of thoughts and feelings were more severe or extreme for the female participants than for the male participants, and overall the impact of secondary traumatic stress symptoms on the female participants' social functioning was much greater. The findings of the current study were further in line with Freedman et al's (2004) study – during the three-month follow-up, female participants exhibited more symptoms than the male participants. However, the results were not the same at the one-year mark subsequent to the event.

Freedman et al's theory for this variation indicates gender differences in response to traumatic events in terms of confronting and addressing recovery needs during the initial year of exposure. Women do not necessarily have an increased awareness of trauma but rather possess

an expressive method by which to express feelings and emotions in a way that is socially acceptable, unlike men (Freedman et al 2004). Freedman et al. also suggested that women are more likely than men to develop secondary traumatic stress symptoms and other mental health disorders from exposure to traumatic events (Sonne et al 2003). In this latter study, the female professionals reported greater frequency and intensity of secondary traumatic stress symptoms as avoiding thoughts, feelings, and conversations surrounding the traumatic events and materials – these findings were consistent with the current outcomes where females displayed higher levels of avoidance.

Gender roles can influence individuals' age appropriate and cultural roles (Lorber 1994). Accepted norms of gender characteristics establish patterns for individuals in social organizations, the family and as individuals (Lorber 1994). For example, men and women conduct themselves differently socially when the situation is related to their responses or mannerisms. Women have traditionally been labelled as more emotional, whereas men are described as more logical (Lorber 1994). This label describes women as being reactionary and emotional to stress and trauma whereas men respond with behaviours that are cold and logical. The genders are presented as having very different emotional dispositions and personality traits that influence the experience of a traumatic event (Lorber 1994).

In their research, Sonne et al (2003) reported that the majority of male participants described themselves as negatively affected by a traumatic experience related to a car accident, a natural disaster, or being physically attacked with a weapon. This research noted no significant gender difference in all categories other than the average number of physical traumas or other natural disasters or accidents experienced by men was higher than women (Sonne et al 2003). Gender roles are demonstrated by the individual's reactions and responses to life experiences as

manifested by behaviours, gestures and physical responses. These roles are developed traits of the individual's personality supported by gender norms accepted or expected by society (van der Kolk et al 1996). Social expectations, which are constantly reinforced by interactions, solidify these accepted norms (Pimlott-Kubiak and Cortina 2003).

Role perceptions and role expectations serve significant functions when studying gender differences in secondary trauma because of the discerning pattern of susceptibility and capacity for recovery. Lipsitz-Bem's (1993) research suggested that the concept of gender plays a stronger role in the determination of patterns of differences in perception and processing of traumatic events and materials. These gendered social control techniques are the formal and sometimes informal methods of approving and rewarding behaviours that maintain the stigmatization and social isolation associated with trauma. Lipsitz-Bem further noted that gender differences and trauma influences the principles in terms of role expectations for males and females. She suggested that this shaping is performed through three gender lenses. The first lens, andro-centrism, is the assumption stereotype that men are independent human beings and women are less so. The second lens, gender polarization, is the view that male and female differences are imposed upon cultural phenomena such as social roles and emotional expressiveness. The third lens, biological essentialism, rationalizes and legitimizes the natural consequences of the biological natures of women and men (Lipsitz-Bem 1993). It can be suggested lenses act as a barometer of normality against which men and women judge themselves and model their behaviour to be considered normal. These behaviours are considered to be traits that are labelled as masculine or feminine characteristics and considered appropriate behaviour for the genders.

Gender can be seen as the result of either a process of socialization or a socially dictated creation of acceptable norms that individuals use to construct their own realities relative to

acceptable social interactions and situations. Johnson (1997) provided a strong statement for how social constructs are developed and used in society:

Using gender to define the core of what makes us human created huge contradictions: it requires us to define men and women as fundamentally different from each other and yet also as full human beings. Rather than confront the contradiction, we obsess about gender and define it as the core of social order and ourselves. And in struggling to hold the lie together, we keep ourselves from knowing what is really going on and what it's got to do with us.

5.11 Emotional Distress

Previous findings by Bride (2007) and Pearlman and Saakvitne (1995a,b) were in line with other studies indicating that counsellors involved in direct practice with children, youths and adults who have had traumatic backgrounds are prone to experience some level of emotional distress. Pearlman and Saakvitne (1995a, b) added that therapists working with survivors of sexual trauma were at higher risk of developing some emotional distress due to exposure to traumatic material. Furthermore, results of the current study revealed that years of work in the profession, and age and participants' gender conjointly explained an additional significant portion of variance (19.7%) in experience of emotional distress, where years of work in a profession resulted in a decrease in the levels of emotional distress.

A study by Devilly et al (2009) found that older participants who have worked within the field for a longer duration and have managed to cope with stressors reported less symptoms of secondary traumatic stress than newer professionals. These results support studies that have contributed to the notion that females are at a significant risk for emotional distress as a symptom of secondary trauma (Brady et al 1999; Meyers and Cornille 2002; Schauben and Frazier 1995).

In general, levels of emotional distress reduced relatively as years of work increased among males and females. Various studies both support and contradict this notion. For example, Chrestman (1999) stated that therapists who treat trauma stressed patients showed a decrease in emotional distress as they increased their professional experience. Supporting this finding, Pearlman and MacIan (1995) found that longer years of experience were associated with a decreased potential for secondary traumatic stress symptoms. However, Kassam-Adams (1999) stated that years of experience were not linked to therapists' secondary traumatic stress or emotional distress. Meyers and Cornille (2002) suggested that professionals who worked longer periods of time in the field of child protection, and as an outcome were exposed longer to traumatic material, experienced more severe symptoms of secondary traumatic stress such as emotional distress than those who were in the field for fewer years. The reason for this could be that these professional worked directly with different patients for long hours during the week. They might also not have had enough appropriate support from their organization. Studies have indicated that longer hours and lengths of assignment are factors associated with high secondary traumatic stress symptoms; though a lack of understanding and support from senior staff have been shown to result in emotional distress and other related symptoms associated with secondary trauma among professional (Adams et al 2008).

It is important to define effective supervision – not only does it require professional practice knowledge, but also skills in coordinating work and workload, setting limits and manageable goals, and monitoring work processes for fellow professionals (Kadushin 2002). For this reason, supervisory communication regarding job-related matters is particularly essential. According to Jain's (1973) study on the relationship between effectiveness of supervisory communication and a supervisor's performance in hospitals, clinics and practices, supervisees

recognize that the information they can obtain regarding hospital or clinical policies and tasks is satisfactory, positive and helpful. Jain (1973) also argued that effective supervisory communication enables supervisees to exchange a lot of information regarding task-related issues and helps supervisors to understand professionals' opinions about their current working experience, including aspects such as workload or role conflict, based on direct input from the professionals concerned. If professionals express concerns that their role is unmanageable and stressful, supervisors could share information up and down the organization hierarchy to assist and guide the professionals in comprehending how management processes affect frontline workers' abilities to commit to their jobs.

5.12 Secondary Traumatic Stress

The occurrence of secondary traumatic stress measured by the STSS revealed that being in a job where professionals are likely to experience secondary traumatic stress due to direct or indirect traumatic material and events accounted for 8.4% of variance. The literature reviewed in Chapters 1 and 2 provided comprehensive information regarding the existence and occurrence of secondary traumatic stress among various types of caring professionals (Atkinson and Taylor 2003; Bell et al 2003; Dane 2000; Figley 1995; McCann and Pearlman 1990; Miller 2007; Perron and Hiltz 2006; Pierson and Pierson 1989; Tehrani 2007). Data for the present investigation revealed also that there are some levels of secondary traumatic stress; however, none of the groups reported very high levels. Furthermore, years of work in the profession, and age and gender of the participants conjointly explained an additional significant portion of variance of 19.5% in experience of secondary traumatic stress. In particular, years of work in the profession resulted in a decrease in the levels of secondary traumatic stress where females reported higher levels of secondary traumatic stress than males. Lastly, the interaction of

occupation and years of work in the profession, and gender and years of work in the profession conjointly accounted for an additional 2.9% of variance, which was not significant.

As such, working in any particular profession had no effect on reduction of levels of secondary traumatic stress as years of working in the profession increased. The only significant interaction between years of work and occupation was observed among counsellors who showed a faster decrease in secondary traumatic stress as years increased at work than participants in other occupational groups. With regard to gender differences, there was no interaction between gender and years of work suggesting that the effect of years of work on a decrease in secondary traumatic stress was similar for both males and females.

Secondary traumatic stress is a reaction experienced by people who have empathetically listened to the traumatic experiences experienced by other individuals (Nelson-Gardell and Harris 2003). In addition, reactions of secondary traumatic stress might reveal themselves in ways that are very similar to post-traumatic stress disorder. Possible reactions or symptoms may involve avoidance, intrusion and arousal, emotional distress, hyper-arousal and cognitive changes (Bride et al 2007). Some of the participant groups of the current study did indicate inclination for such reactions or experiences; however, not on a very high level. The reason for participants not to indicate high levels of secondary traumatic stress might be that they sincerely believe that they are not severely affected by secondary trauma as an outcome of working with traumatized people. It might also be that the participants in the current study have effectively adapted methods in coping with the exposure of secondary traumatic stimuli (Adams et al. 2008; Creamer et al 1992; Dane 2000). Reporting might also have been affected as participants feared that their participation in the study would somehow impact their employment despite the fact that confidentiality of the questionnaire was stressed and guaranteed. Furthermore, participants might

have felt that their participation in the study would somehow affect the way in which their work colleagues viewed them. Participants' answers might have been manipulated or biased by these conversations.

5.13 Concluding Remarks

The current study has investigated the experience of secondary traumatic stress and related symptoms and has attempted to provide insight into the perspectives and experiences of staff working in several professions across a range of hospitals, practices and boroughs. The literature reviews in Chapters 1 and 2 revealed that much research has already been conducted on secondary traumatic stress and its effects on professional healthcare workers, especially among therapists, social workers and law enforcement officers. However, it has not specifically considered ambulance technicians, emergency unit doctors and nurses, psychologists and psychiatrists as part of the caring profession. The framework guiding this study was an integration of Figley's Secondary Traumatic Stress theories and has concluded that experiences with secondary traumatic stress symptoms endured by these professionals affect the mental and physical well-being of those professionals who provide care to trauma victims and survivors.

However, gaps within the literature still exist; other areas need to be investigated, including the prevalence and risk of secondary traumatic stress, compassion fatigue and burnout. Furthermore, as noted throughout the current research, working with traumatized individuals may affect the caring professionals' mental health and well-being. Clearly, previous research and the current study have indicated that they are affected too. Those who support victims of random violence, incest and rape, for example, are all at risk of suffering from secondary traumatic stress and its associated components. All of these individuals are impacted by the traumas and will wrestle with assimilating these experiences into their psyches and world views. Professionals

exposed to either primary or secondary trauma cross indistinguishable lines where they deal with broken lives and many unanswered questions. Once across this line, there is no way back and the professionals may risk a major change in their lives during that process.

The findings of this study can or may help professionals understand the health risks that go hand in hand with working with traumatized individuals. Therefore healthcare givers may adapt ways in addressing personal meaning and purpose in life, in the midst of suffering from secondary traumatic stress symptoms. There are no short cuts through the recovery process, and the experience can be quite disorienting for a time. However, previous research has indicated that those who are able to creatively rework their world views in ways that allow for injustice and suffering, and find meaning and purpose in life, may have higher levels of mental health well-being and compassion satisfaction. Trauma and secondary traumatic stress will always exist, as will unanswered questions about the nature of suffering and justice in the world. One cannot change the past, or alter the experiences of trauma survivors and victims or their helpers, but professionals can utilize the strengths gained in suffering by extending compassion, resiliency and knowledge to others who are affected. Finding a way of accepting that life isn't fair, that injustice and suffering will occur, doesn't mean that a helping professional should also turn a blind eye to the violence committed worldwide or to those who suffer. Adopting an attitude of realism will allow them to move toward creating positive meanings within their suffering and beyond. In fact, the world is filled with examples of so many who are exposed to traumas through war, natural disasters, abuse and violence – as the literature has noted, those who are involved in helping others heal, rebuild or conserve their lives will be deeply touched by all they have witnessed.

However, caregivers who are able to create positive meanings will not only be protected from higher levels of secondary traumatic stress, they will also be of greater assistance to those they help. As indicated in the current study, healthcare provision is a stressful profession. Previous literature has also suggested that these professionals encounter numerous work-related stressors as they attempt to deliver quality care to their patients and clients. During the patient or client care process, these helping professionals often give their patients a lot while giving little attention to themselves. In other words, these professionals often place their patients' needs ahead of their own and they are at risk of developing emotional distress and suffering from the negative consequences of these selfless acts. Indeed, not using effective coping techniques and not having enough time to recharge emotionally make healthcare providers vulnerable to the effects of secondary traumatic stress as witnessed in the current study. Untreated secondary traumatic stress can lead to feelings of despair and hopelessness causing many professionals to quit their careers, thereby exacerbating staffing shortages and leading to a decrease in the quality of patient and client care.

This study's findings could increase healthcare providers' awareness of secondary traumatic stress, work-related stress, and their effects on employees' ability to provide genuine healthcare. Through increased self-awareness, these healthcare professionals may be able to understand better their experience with work-related stress and secondary traumatic stress in order to help them continue to meet superior standards of care for their patients and clients. Increased knowledge of the existence of secondary traumatic stress and its symptoms and effects would also enable these healthcare providers to identify colleagues that may be suffering from secondary traumatic stress symptoms. The results of the present investigation have highlighted

the need for more detailed information on the quality, types, utilization and effectiveness of support systems available and the need for comprehensive coping measures.

As discussed, the present study also looked at years of employment, where the researcher controlled for age, as these two variables are strongly connected and it could be the case that it is age rather than years of employment that predicts low or high levels of secondary traumatic stress, compassion fatigue and burnout. From the literature review, the researcher found variables relating to secondary traumatic stress and years of work and the outcomes from the current sample did indicate that the longer certain professionals had been in their jobs the less the levels of secondary traumatic stress symptoms they displayed. It is likely that these older participants have worked within the field for longer and have managed to cope with the stressors of therapeutic work, whereas younger professionals with less experience might have dropped out of the work due to stress or burnout or a realization that the job did not suit them.

Another important aspect is the ability of therapists to maintain clinical and personal boundaries, and to obtain and utilize appropriate professional support systems. It may well be that individuals who fail in this regard are more affected by the struggles faced by their patients and clients (all patients and clients) and leave the profession earlier. More research in clinical practice components and supervision is required to satisfactorily explain how much of the variance in therapist affect is due to these elements.

This research has identified that workplace burnout is relevant to individuals and staff safety or wellbeing . It would be useful for future research to utilize longitudinal research designs and identify what predicts affective distress among professional therapists, and what factors are protective. This research suggests that both workplace and individual factors contribute to the development of affective distress among therapists and although workplace factors have been

well researched, primarily through burnout literature, individual vulnerability factors remain relatively unexplored. Ultimately, these findings support recent research and theory around individual resilience, which has indicated that the impact of working with traumatized patients is overestimated.

Overall, healthcare providers in the United Kingdom and across the world need to be protected from secondary traumatic stress. Continuing education programmes that focus on secondary traumatic stress could be scheduled so that healthcare providers learn to understand their vulnerability resulting from the care services they offer. As noted in this study, extra consideration and attention need to be paid to new healthcare professionals during their first year of working in the field. Professionals need support and preparation for traumatic material and events. Researchers need to develop and test interventions to help and guide healthcare providers to deal with secondary traumatic stress and its related components.

5.13.1 Limitations of this Research

This study has investigated the experience of helping professionals, including paediatric emergency unit doctors and nurses, ambulance technicians, social workers, counsellors, psychologists and psychiatrists, with secondary traumatic stress and its related symptoms such as compassion fatigue, burnout, intrusion, arousal, avoidance and emotional distress. Furthermore, compassion satisfaction was measured alongside secondary traumatic stress and its associated symptoms and reactions. However, the outcomes of this study cannot be generalized as it surveyed a relatively small number of professionals – their experiences may not be truly representative. Similar studies conducted with other employees from the caring professions might yield different outcomes in terms of describing the lived experience with secondary

traumatic stress and its associated symptoms. Work-related stressors found in other environments may not be similar to those described in this study.

Although this study has reported interesting findings, there were, however, limitations that should be considered with respect to the reliability of the data. The data utilized in this research were based upon information allocated from self-reporting questionnaires. Self-reported data can rarely be independently identified or verified. The information was subjectively reported which means it had to be taken on face value. Self-reported data might also be subject to several potential sources of bias that might influence how a person might respond to the questionnaires.

Also, a substantial proportion of males participated in the current research. It can be contrary to belief and value systems for males to openly display signs of vulnerability or perceived weakness. That is to say, males may be less likely to report or may under-report on any subject that they perceive might reveal a weakness. This appeared evident in this study, as males reported less secondary traumatic stress symptoms when compared to females.

Additionally, when using a self-reporting questionnaire, the researcher must consider that many things can influence participants' responses. For example, the mood they are in, the time required to fill in the questionnaire, boredom, random responses, or feeling uncomfortable answering such personal questions. Participants might also have felt too exposed in revealing their true feelings, emotions, thoughts and experiences regarding work. Clearly the topic was sensitive to all participants and they might not have answered honestly all questions in the four different surveys. Despite the fact that the questionnaires administered in this study were reasonable and popular instruments to use for investigations concerning secondary traumatic stress and symptoms, they should have contained more open-ended qualitative statements relevant to professional feelings. This would have provided the researcher with a more in-depth

understanding of the symptoms and reactions of secondary traumatic stress experiences among different healthcare providers.

A few participants started filling in the questionnaires but changed their minds and withdrew from the process. Those who chose to continue participation in the study might differ in systematic ways from those who did not – individuals experiencing high rates of burnout and secondary traumatic stress might have felt too overwhelmed or did not have enough time to participate in the survey. In addition, though survey instruments provide confidentiality and the freedom to respond candidly, the responses from the sample did not allow for a more qualitative forum, due to the nature of the study design. Had the questionnaires been formatted to allow for comments from the participants, a more comprehensive analysis may have provided the researcher a clearer understanding of other factors that may have contributed to secondary traumatic stress risk. More importantly, qualitative methods could have been enhanced by conducting in-depth interviews to purposively sample participants who had reported that they experience secondary traumatic stress. A skilled interviewer could prompt participants to improve the description of the phenomenon.

It is also worth indicating one major limitation to the current study was the lack of male participants – the researcher aimed to have an equal number of males and females; however, the professions chosen for this study are dominated mainly by female professionals. If an equal number of males and females had been allocated, it could have been hypothesized that the data would most likely suggest significant differences in the response to secondary traumatic stress symptoms based on gender. If that had been found to be accurate, it would have had serious implications for both healthcare employers and employees alike.

Additionally, the researcher expected higher rates in the responses of secondary traumatic stress. It is possible that the healthcare providers who were experiencing secondary traumatic stress symptoms were more likely to respond and take part in this study because this research might have held personal interest. On the other hand, it is possible that the most traumatized healthcare workers may not have wanted to articulate their experience through participation in this research. The response rates in this research were lower than those currently recognized by healthcare providers. They range from 33% (Abendroth and Flannery 2006) to 66% (Quinal et al 2009); these previous studies were also quantitatively-based like this study, where the healthcare providers were required to fill out a questionnaire. The previous studies with higher response rates included a letter attached to the survey from the interviewee's department manager, which may have had introduced a more personal touch and impact.

Lastly, another important limitation is that the current research design is cross-sectional, which means one cannot imply causation. It can clearly be stated that in order to determine that years of employment are the cause of reducing secondary traumatic stress, one has to conduct a longitudinal research or experiment to examine causal relationship between variables. Also, longitudinal and controlled studies are vital to further explain and to exactly 'pinpoint' that burnout may increase a risk of developing secondary traumatic stress. For example, the outcomes of the two longitudinal studies offered new views of the association between job-related burnout and STS. Most interestingly, it was found that burnout could play a role in developing secondary traumatic stress but STS reactions are not associated to burnout at follow-ups. The cross-lagged panel analyses of the US and Polish participants professionals who were indirectly exposed to traumatic conditions at work produced reliable findings. The association between job burnout and STS stated to be uni-directional, with job burnout existing as a possible 'gateway'

consequence that may increase the risk of developing secondary traumatic stress. This study is one of the first to observe the directions in the relationships of two essential job-related consequences that can play a role in professionals working with patients exposed to traumatic situations (Maslach et al 2001). Therefore, it offers researchers and theorists with notions of the current frameworks which take into account both burnout and STS reactions (Lesniewska et al 2015). The research findings bring up arguments for involving unidirectional path from burnout to STS into the theoretical frameworks. The results of this longitudinal study are in agreement with the assumptions made in COR (Conservation of Reservation Theory); COR states that personal and environmental resources are exhausted because of the extreme outlay to handle various types of stressors (which may include work-related stressors) and their direct consequences (such as high levels of job burnout). This extreme outlay results in only few resources to handle the continuous exposure to indirect trauma which makes professionals vulnerable to STS symptoms. Earlier studies discovered that burnout relates to decline or low levels of various resources (Lesniewska et al 2015). The outcomes indicated that loss spiral because of high levels of job burnout and limited resources remain critical to deal with indirect exposure to traumatic events. Subsequently, the report from Lesniewska's (2015) suggests breaking the loss spirals by anticipating treatment programs for all healthcare professionals; the present does not discuss the kind of resources, however, earlier research suggested that resources worthy considering to anticipate across several organizational factors are caseload size or diversity (Voss-Horrell 2011), which are not easy to modify, but they could also contain modifiable factors such as control beliefs or self-efficacy beliefs. Recent meta-analyses stated that such modifiable beliefs regarding one's own capability to cope with stress and its risks are associated to reduce levels job burnout (Lesniewska et al 2015). For that reason, self-efficacy

and control belief possibly will be introduced in resource-building prevention program in the United Kingdom for healthcare professionals at risk or possibility for job burnout and consequent secondary traumatic stress.

When comparing the U.S and the Polish sample, the researcher found certain differences between the two samples. For instance, the association between work experience and job burnout at in the Polish sample was positive but insignificant, whereas, in the U.S. sample this relationship was significant and negative. In addition, mean levels of job burnout and STS were higher in the Polish sample than in the U.S. and UK sample. Unfortunately, it is difficult to elucidate if such differences occurred because of cultural factors, dissimilarities in occupations of the samples, or the nature of trauma exposure. For example, Polish nurses had higher job burnout than the UK sample, higher stress and lower life satisfaction were reported by the Polish sample in comparison to the U.K sample, so to sum being Polish was a forecaster for stronger secondary traumatic stress among fire-fighters compared to U.K sample (current sample), Czech, Italian, German, Spanish, Swedish, or Turkish (Schmidt et al 2014). Future research must clarify the reasons to such dissimilarities by taking into account cultural and organizational factors, occupation-specific responsibilities and resources. Additionally, the differences in the outcomes discovered in the Polish sample and the U.K. could be because of measurement complications. Again, the current research offers limited perceptions for the reasons of such differences. Differences in profession, kinds of indirect traumatic exposure, accessibility of support, and their training may all be contributing factors of STS in U.K samples. Future researchers need to identify this matter in depth. Even though the data are indicative of a fundamental path from job burnout to STS, correlational studies deliver very limited arguments for causation. While, ethical apprehensions prohibit researchers from carrying out experimental manipulations of the main

concepts, larger scale natural experiments can be taken place to strengthen the assumptions of secondary traumatic stress disorder and its reactions. The current experiment trusted the use of self-report questionnaires and although such measurements are moderately easy to attain, they are subject to a host of concerns. Clarke et al (2005) reported such concern regarding measures of depression. Behavioural measures, other-ratings (including diagnostic interviews), and personnel records provide possibilities for more veridical measurement approaches and reduce the effect mono-method bias. Lastly, even though the present research was diverse, the generalization across cultures and professions would be premature. The current outcomes enhances the knowledge of the existing theoretical frameworks, contributes to the explanations regarding the effects of indirect traumatisations as well as the prevention and lastly the research informs treatment programs dedicated to human services professionals dealing with traumatized clients/patients.

5.13.2 Strengths of this Research

Despite the limitations discussed in the last section, the current research project has made some valuable contributions to the literature on secondary traumatic stress reactions among a sample of healthcare providers. The study used seven different groups of professions (A&E doctors, A&E nurses, ambulance technicians, social workers, counsellors, psychologists and psychiatrists). The respondents allocated for this investigation were all practitioners who have provided direct services to clients and patients that have experienced trauma. The survey data of ambulance technicians have been of most interest in this research. The current research also selected participants from 17 different healthcare providers and used standardized instruments that assess the most vital symptoms associated with secondary traumatic stress. It is hoped that

the material presented in this study will be useful for healthcare educators as well as practitioners and service providers; and indeed to all of their respective agencies and practice divisions.

Focusing on instruments, the questionnaires utilized in this research were easy to complete and have been tested for reliability and validity. Despite the limitations mentioned above, the self-reporting format was considered to be the most practical choice over interviews. One of the most important reasons for this decision was that the questionnaires could be administered to a relatively large, demographically diverse sample, and this form of data gathering is considered to be much less time consuming and invasive than other methods. The latter method of data collection procedure has been indicated to encourage study sample's disclosure (Gillham 2000).

Furthermore, data reliability suggests that respondents answered with some consistency and seemed to find the questionnaires comprehensible. Moreover, despite the limitations noted earlier, the strengths of the study have not been overshadowed – the most important of which is that the study has focused on areas which have been neglected by previous research work. In addition, the results obtained from this study are believed to benefit a range of practitioners in understanding feelings and emotions related to their professional working lives. It is also believed that the findings will make a helpful contribution to the field of secondary traumatisation literature and will allow for an improved conceptualization of secondary traumatic stress and its components.

This study has reflected on the notion that 'those who risk their lives and their welfare to assist others, should not be neglected' (McCammon and Allison 1995). Overall, this research work has tried to report on the gaps in secondary trauma literature and provide much needed evidence on important variables such as exposure, compassion and well-being involved in the manifestation of secondary traumatic stress progression. The hope, therefore, is that the

outcomes of this research will allow trauma workers to continue with their valuable and significant service, and remain satisfied in their involvement to help patients in their journey for full recovery.

Finally, although the current research has focused on the negative variables of secondary traumatic stress, considerable space and discussion has also been devoted to accounts of resiliency and compassion satisfaction which are both important elements of trauma care work, and role satisfaction, a heightened sensitivity to other vulnerabilities in working practices and continued devotion to fulfilling the responsibilities essential in the work of trauma care.

5.13.3 Recommendations

Previous research work has documented the features of compassion fatigue, burnout and secondary traumatic stress, particularly among social workers and law enforcement officers (Figley 1995; Hyman 2004 Perron and Hiltz 2006). The reported findings of this study indicate that participants manifested higher levels of compassion satisfaction than compassion fatigue. Also job burnout and secondary traumatic stress were not as high as expected. Future research on compassion fatigue, job burnout and secondary traumatic stress should focus on exploring the demographic variables of study participants in greater depth. It should also include other possible risk factors not included in this study and explore additional protective factors that may assist professionals in their work, including supportive and healthy relationships in the workplace.

Some researchers believe that emergent leadership (from middle managers) and engaging, supportive leadership styles may profoundly manipulate the capability of employees to be resilient to adverse situations: ‘Leaders are the stewards of organizational energy (resilience), they inspire or demoralize others, first by how effectively they manage their own energy and next by how well they manage, focus, invest and renew the collective energy (resilience) of those

they lead' (Loehr and Schwartz 2003). Furthermore, the external environment and social relationships are seen to be vital to resilience. If networks of successful relationships are not recognized, both for employees and for the organization itself, the organization, according to this conceptualization, is not seen as having the resources to enable change productively and positively. Social and institutional support is counted as key at every level. Also, organizational resilience is accounted as dependent on the resilience of stakeholders, competitors and the industry in which it operates: 'People with trustworthy relationships and personal support systems at work and with friends and family are more able to cope with stress and organizations more likely to hold up in a crisis' (Johnson-Lenz 2009). Studying such additional variables may offer useful information on the impact of compassion fatigue, job burnout and secondary traumatic stress.

Also, it would be beneficial to conduct further qualitative studies that investigate the phenomenon of secondary traumatic stress and its related symptoms utilizing sample(s) from other areas of the United Kingdom. Future researchers should also consider longitudinal studies because this approach would allow a comprehensive and insightful understanding of possible causes of secondary traumatic stress among professionals working in different emergency settings and practices. These future proposed studies would be useful in predicting the risk and prevalence of compassion fatigue and burnout, as well as assisting in formulating policies on the mental health and well-being of professionals working with traumatized individuals. Furthermore, qualitative studies should also be conducted and extended to different workplace settings that might account for areas of accumulated levels of stress such as in hospices, critical care nursing and child social work. Any future research that uses a qualitative approach should allow the research participants to describe their experiences with secondary traumatic stress and

work-related stress in their own words, allowing for a meaningful discovery of their lived experience. A longitudinal study may also provide for more varied responses and may capture participants' feelings and emotions as they vary over time. Indeed, a mixed designed approach and a longitudinal study may make the participants more aware of the existence of the phenomena of compassion satisfaction, compassion fatigue, burnout and secondary traumatic stress.

Other useful material which might emerge in a quantitative study or in the mixed designed research is that the participants may discuss number(s) of clients or patients they see in a week and the type of trauma they are presenting. All these issues would allow future researchers to determine in more detail the reasons for secondary traumatic stress and for the development of appropriate prevention measures that will help caring professionals in work settings. Searching for ways in which to effectively address and possibly prevent the occurrences of symptoms is vital to the well-being of the healthcare providers who are responsible for assisting, helping and guiding clients and patients who are going through or have previously gone through different types of traumas. Overall, reducing the effects of compassion fatigue, job burnout and secondary traumatic stress will allow the helping professionals to be more resilient and effective in their job settings – hence, appropriately responding to the needs of the clients and patients that they work with.

Recent research (Rainville 2015) has stated that an increasing number of lawyers who work with various victims of trauma are displaying high levels of secondary traumatic stress symptoms. It has been indicated that lawyers are four times more likely to experience depression in comparison to the general population. They also have been found to display higher rates of suicide and substance abuse. Literature indicates that majority of lawyers lacked adequate

training in coping with trauma during their education (Rainville 2015). Besides working directly with trauma victims, one of the core reasons lawyers may develop secondary traumatic stress reactions is due to challenging case-loads and very long working hours which are common factors to this profession (Barnes 1997). There are many more areas of professions that need to be explored in regards to secondary traumatic stress reactions. It is obvious that supplementary research is needed on the various theoretical frameworks of trauma. Although, the current research contributed support to several studies that have previously been conducted (Figley, 1995, Maslach 2001, Pearlman 2003, Schmidt et al 2011, Bride, 2005), there is still controversies and inconsistencies amongst the research that has sought to test the PTSD-STS model.

Further research is also needed to explore what could potentially be an important treatment model for post-traumatic reactions that become chronic and debilitating. It is very important to focus on professions where workers are not trained or prepared for traumatic situations. For example, it is vital to research the impact of railway suicides on train drivers in the United Kingdom. As the topic of railway suicide becomes more prevalent in the media it is important that the effects of such incidents on the workers involved is not lost. Further research with larger sample sizes is therefore needed into the psychological effects of witnessing a railway suicide so that train operating companies and professionals have the information about how best to support drivers both before and after such incidents. It would be beneficial for future research to also include those drivers who have resigned, as they are likely to be able to provide additional information on how they were affected by the suicide and why they chose to give up driving trains. During this investigation the researcher was also made aware of the many other workers involved in the aftermath of a railway suicide, who receive very little support and recognition,

such as those involved in the 'clean-up', members of the British Transport Police, driver managers and engineers.

The list of professionals who might benefit from further research is extensive, as stress in all its forms – primary, secondary, debilitating, traumatic – is prevalent in the home and workplace, all aspects of our daily lives, as never before. Apart from all of the professions discussed so far, one should not forget lawyers, judges, criminal investigators, refugee council workers ... so many professionals hear and see traumatic events experienced by their clients and yet many of them are not trained or prepared to handle secondary traumatic stress and do not have a therapeutic support structure at work. There is a long way to go before this situation is resolved.

Appendix A

Participant Information Sheet



Title of Research: *The Effects of Secondary Trauma on Professionals Working with Victims and Survived Traumatized Individuals*

Rita Konistan
PhD Student, London Metropolitan University

Dear participant,

You are invited to take part in a research study. This PhD research project is a carefully planned to investigate the overlap and differences between various terms associated with post-traumatic stress disorder (PTSD) including Secondary Traumatic Stress, Compassion Fatigue, and Burnout. The research also aimed to investigate the impact of secondary trauma on how professional working with traumatized individuals might experience direct or indirect influence. Please read the below information carefully and discuss it perhaps with your parents or guardians if you wish. You are welcome to contact the researcher, see contact information, should you need more information. Take your time in deciding whether you would like to volunteer and take part in this study.

Why is this study being done?

This study is being carried out to help the researcher to learn more about factors associate with secondary traumatic stress. It is hoped to help the researcher understand whether factors such as profession, age, gender and years of work experience play a role in secondary traumatic stress symptoms.

Why have I been asked to take part?

The study is intending to include volunteer participants remanded in the healthcare profession and hence answer four set of questionnaires should they like to participate voluntarily.

Do I have to take part?

No, you do not have to take part in the study. It is entirely your choice. Your rights will not be violated in any way.

Can I pull out of the study at any time?

You can pull out of the study at any time you like. No questions will be asked as to why you want to pull out, and any information you have given will be destroyed.

What will happen to me if I take part?

If you would like to take, you will be asked to fill out a consent form, which is needed to be returned to the researcher. Then you will be invited to attend a short meeting, and you will have a chance to meet the researcher and ask any questions. If you are still happy to take part, you will be asked to sign a consent form as well. Shortly after this, you will be invited to take part and give answers to questions that will be asked.

When and where will the study take place?

The study will be carried out in the conference room of your practice. You will be notified of the date and asked whether you are able to attend. The study will take place in the morning hours after group meetings has taken place; the time needed will last between 30–45 minutes.

What if I can't answer the questions, or do not want to answer the questions?

You do not have to answer the questions that the researcher asks you and those presented in the survey. If you are unsure of how to answer a question, or if you do not want to give an answer, the researcher will not put any pressure on you, but you can go onto the next question. Remember that you are able to pull out of the study at any time.

What will happen to the questionnaire and the answers that I have given?

The questionnaires with the answers that you have given will be stored safely and securely with the researcher at home. They will be destroyed once the study has been marked and completed. Any data required for publication will be kept for 5 years, after this they will be destroyed. The data will be read by the university staff 'examiners', when marking. However, identity of the individual will not be disclosed to anyone.

Will anyone know what I have said or that I have taken part?

Nobody, the manager of the practice will know that you have taken part in this study. The study will take place in a room allocated for it, so nobody will hear what is being said. All the questionnaires will be carefully and securely locked up. All the information that identifies you in the questionnaires will be removed and kept separate from the consent and the assent forms. All information on this form will not be available to anyone else. If you pull out of the study, all the information you have given will be destroyed. The only time when your details will be disclosed is if the researcher thinks you are at risk of harm or if you wish to get help with anything that is concerning you.

Is this study safe to do?

The study has been checked and approved by Research Ethics Review Panels at London Metropolitan University. This means that they are satisfied that the study follows the ethical guidelines provided by the professional body

What if I have concerns and worries about the study?

If you have any concern about the study or the researcher, please contact Dr Amer Hosin, the Project Supervisor at London Metropolitan University (see contact information below). Thank you very much for taking the time to read this information sheet and thinking about taking part in the study.

Yours sincerely,

Rita Konistan

PhD Student, London Metropolitan University

Appendix B

Participant Consent Form



Title of the PhD Research Project: *The Effects of Secondary Trauma on Professionals Working with Victims and Survived Traumatized Individuals*

I have been given time to read the information sheet and I am aware of the time needed to complete the questionnaires, as well as my right to withdraw at any time without having to state a reason. I understand that my participation is voluntary and I am aware of what my participation will involve.

I also understand that there are no risks involved in the participation of this study.

All my queries and questions that I have about the research have been addressed and answered satisfactorily.

I agree to participate and give my consent to be involved in the study

Participant's signature:

Participant's name (please print):

Date:

Appendix C

Debriefing Sheet for Participants



The Effects of Secondary Trauma on Professionals Working with Victims and Survived Traumatized Individuals

Dear participant,

Thank you very much for voluntarily participating in this study. The aim of this PhD research is to investigate the factors associated with secondary traumatic stress among different healthcare professionals and how such factors affect professionals in healthcare settings.

This PhD research will be carried out with a sample of healthcare providers working in London, United Kingdom. The main questions/aims that are addressed in this research investigation are as follows:

- i) Do Emergency unit staff such as paediatric doctors/nurses and ambulance technicians who are working with patients of physical trauma/injuries as opposite to professionals working with patients that have psychological trauma (i.e. counsellors, social workers, psychiatrists and psychologists) suffer different levels of post-traumatic stress disorder (PTSD), secondary traumatic stress (STS), compassion fatigue (CF), and burnout (BRN) including intrusion, avoidance and emotional distress?

- ii) Do professionals of different backgrounds including those of different gender, age and career experience differ from each other; particularly in the vulnerability of secondary traumatic stress and its associated components?
- iii) Does work experience and settings associate with manifestation of different symptoms of secondary traumatic stress?

It is hoped that the research findings emerging from this investigation will offer assistance in identifying mental health needs of healthcare professionals who have been exposed secondary traumatic stress symptoms and hence address appropriate policies and future strategies for this fast growing and developing area.

The answers to these questionnaires are completely anonymous and the data from the study is treated in a completely confidential way. This data will be exclusively used for my research project and it will never be used for any other purpose. Participants can withdraw at any time and their data will be destroyed.

Answering the questionnaires on secondary traumatic stress, previous trauma experience and addressing personal issues can be distressing and may provoke in some people and circumstance anxiety. If after the completion of this survey you feel you may need any kind of advice regarding your well-being as a result of the participation in this study feel free to contact me by email or telephone as I could provide you with information about resources and institutions that may be helpful.

If you would like to know the results of this research work or if you have any question about the study, feel free to contact me at [REDACTED] and I will be delighted to let you know the main findings of my research or address questions you may want to raise.

I really appreciate your participation in this study and I would like to thank you for taking your time to complete the survey.

Many thanks
Sincerely,
Rita Konistan
PhD Student, London Metropolitan University

Appendix D

Information Sheet for Manager of the Clinic



Dear Manager,

I am currently studying for a PhD award at London Metropolitan University. I am conducting research work entitled: The Effects of Secondary Trauma on Professionals Working with Victims and Survived Traumatized Individuals.

I am therefore looking for participants to form the sample of my PhD research work. This study has been approved by the Research Ethics Review Panel at London Metropolitan University.

The aim of study is to investigate secondary traumatic stress among varies healthcare professionals in the United Kingdom.

In order to achieve the aims of this study, the professionals at the clinic/practice will be asked to complete three set of questionnaires which take approximately 30–45 minutes each to complete during one class period. It is important that you are aware that if participants wish to withhold from the survey at any time, they can do so, without having to state a reason. Confidentiality will be maintained throughout.

If there are any questions you would like to ask about the study, please feel free to do so and contacting me at [REDACTED]. I will be happy to answer any question you may have. If you allow the volunteer professionals at the clinic/practice to take part in this study, please read and signed the consent form below.

Thank you very much for you time.

Sincerely,

Rita Konistan - PhD Student, London Metropolitan University

Appendix E

Collaborating Organization Approval to be Signed by the Manager



Title of the PhD Research Project: *The Effects of Secondary Trauma on Professionals Working with Victims and Survived Traumatized Individuals*

Volunteer Participant Name:

Collaborating Organisation Manager Name and Address:

Tel No if available:

Date:

I, the undersigned, have given permission to the above research work to be conducted at our rehabilitation centre. I have been fully briefed as to the nature of the project and the requirements for obtaining a suitable sample and administration of the questionnaires and agree this can be undertaken in this organization. All ethical implications that might affect the organisation's reputation and the well-being of its employees and significant third parties have been discussed; and where necessary appropriate action taken. The participants have been and/or will be briefed on health, wellbeing and safety procedures in the organisation.

Signed:

Position in organisation:

Date

Appendix F



General Health Questionnaire (GHQ-30)

(Goldberg and Hillier, 1979)

Age Sex ID Profession

HAVE YOU RECENTLY:

1	been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual
2	lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
3	been having restless, disturbed nights?	Not at all	No more than usual	Rather more than usual	Much more than usual
4	been managing to keep yourself busy and occupied?	More so than usual	Same as usual	Rather less than usual	Much less than usual
5	been getting out of the house as much as usual?	More so than usual	Same as usual	Less than usual	Much less than usual
6	been managing as well as most people would in your shoes?	Better than most	About the same	Rather less well	Much less than usual
7	felt on the whole you were doing things well?	Better than usual	About the same	Less well than usual	Much less well
8	been satisfied with the way you've carried out your task?	More satisfied	About the same as usual	Less satisfied than usual	Much less satisfied

9	been able to feel warmth and affection for those near you?	Better than usual	About the same as usual	Less well than usual	Much less well
10	been finding it easy to get on with other people?	Better than usual	About the same as usual	Less well than usual	Much less well
11	spend much time chatting with people?	More time than usual	About same as usual	Less time than usual	Much less than usual
12	felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
13	felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable
14	felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
15	felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
16	been finding life a struggle all the times?	Not at all	No more than usual	Rather more than usual	Much more than usual
17	been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
18	been taking things hard?	Not at all	No more than usual	Rather more than usual	Much more than usual
19	been getting scared or panicky for no good reason?	Not at all	No more than usual	Rather more than usual	Much more than usual
20	been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less able
21	found everything getting on top of you?	Not at all	No more than usual	Rather more than usual	Much more than usual
22	been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
23	been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
24	been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual

25	felt that life is entirely hopeless?	Not at all	No more than usual	Rather more than usual	Much more than usual
26	been feeling hopeful about your own future?	More so than usual	About same as usual	Less so than usual	Much less hopeful
27	been feeling reasonably happy, all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual
28	been feeling nervous and strung-up all the time?	Not at all	No more than usual	Rather more than usual	Much more than usual
29	felt that life isn't worth living?	Not at all	No more than usual	Rather more than usual	Much more than usual
30	found at times you couldn't do anything because your nerves were too bad?	Not at all	No more than usual	Rather more than usual	Much more than usual

Appendix G



Professional Quality of Life Scale

Professional Quality of Life Scale (Pro-QOL)

Compassion Satisfaction and Compassion Fatigue
(Pro-QOL) Version 5 (2009)

When you *[help]* people you have direct contact with their lives. As you may have found, your compassion for those you *[help]* can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a *[helper]*. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

- 1. I am happy.
- 2. I am preoccupied with more than one person I *[help]*.
- 3. I get satisfaction from being able to *[help]* people.
- 4. I feel connected to others.
- 5. I jump or am startled by unexpected sounds.
- 6. I feel invigorated after working with those I *[help]*
- 7. I find it difficult to separate my personal life from my life as a *[helper]*
- 8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I *[help]*.
- 9. I think that I might have been affected by the traumatic stress of those I *[help]*.
- 10. I feel trapped by my job as a *[helper]*.
- 11. Because of my *[helping]*, I have felt 'on edge' about various things.
- 12. I like my work as a *[helper]*.
- 13. I feel depressed because of the traumatic experiences of the people I *[help]*.

- 14. I feel as though I am experiencing the trauma of someone I have [*helped*].
- 15. I have beliefs that sustain me.
- 16. I am pleased with how I am able to keep up with [*helping*] techniques and protocols.
- 17. I am the person I always wanted to be.
- 18. My work makes me feel satisfied.
- 19. I feel worn out because of my work as a [*helper*].
- 20. I have happy thoughts and feelings about those I [*help*] and how I could help them.
- 21. I feel overwhelmed because my case [work] load seems endless.
- 22. I believe I can make a difference through my work.
- 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I [*help*].
- 24. I am proud of what I can do to [*help*].
- 25. As a result of my [*helping*], I have intrusive, frightening thoughts.
- 26. I feel 'bogged down' by the system.
- 27. I have thoughts that I am a 'success' as a [*helper*].
- 28. I can't recall important parts of my work with trauma victims.
- 29. I am a very caring person.
- 30. I am happy that I chose to do this work.

Appendix H



Emotional Impact of an Event Scale

Measuring the Emotional Impact of an Event

Below is a list of comments made by people after stressful life events. Please mark each item, indicating how frequently these comments were true for you during your time in your current profession.

Select only one answer per row.

		Not at all	Rarely	Sometimes	Often
1	I thought about it when I didn't mean to.	0	1	3	5
2	I avoided letting myself get upset when I thought about it or was reminded about it.	0	1	3	5
3	I tried to remove it from memory.	0	1	3	5
4	I had trouble falling asleep or staying asleep because of pictures or thoughts about it that came to my mind.	0	1	3	5
5	I had waves of strong feelings about it.	0	1	3	5
6	I had dreams about it.	0	1	3	5
7	I stayed away from reminders about it.	0	1	3	5
8	I felt as if it hadn't happened or was un real.	0	1	3	5
9	I tried not to talk about it.	0	1	3	5

10	Pictures about it popped into my mind.	0	1	3	5
11	Other things kept making me think about it.	0	1	3	5
12	I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	3	5
13	I tried not to think about it.	0	1	3	5
14	Any reminder brought back feelings about it.	0	1	3	5
15	My feelings about it were kind of numb.	0	1	3	5

Appendix I

Secondary Traumatic Stress Scale



SECONDARY TRAUMATIC STRESS SCALE

The following is a list of statements made by persons who have been impacted by their work with traumatized clients. Read each statement then indicate how frequently the statement was true for you in the past seven (7) days by circling the corresponding number next to the statement.

NOTE: 'Client' is used to indicate persons with whom you have been engaged in a helping relationship. You may substitute another noun that better represents your work such as consumer, patient, recipient, etc.

	Never	Rarely	Occasionally	Often	Very Often
1. I felt emotionally numb	1	2	3	4	5
2. My heart started pounding when I thought about my work with clients	1	2	3	4	5
3. It seemed as if I was reliving the trauma(s) experienced by my client(s)	1	2	3	4	5
4. I had trouble sleeping	1	2	3	4	5
5. I felt discouraged about the future	1	2	3	4	5
6. Reminders of my work with clients upset me	1	2	3	4	5
7. I had little interest in being around others	1	2	3	4	5
8. I felt jumpy	1	2	3	4	5
9. I was less active than usual	1	2	3	4	5
10. I thought about my work with clients when I didn't intend to	1	2	3	4	5
11. I had trouble concentrating	1	2	3	4	5
12. I avoided people, places, or things that reminded me of my work with clients	1	2	3	4	5
13. I had disturbing dreams about my work with clients	1	2	3	4	5
14. I wanted to avoid working with some clients	1	2	3	4	5
15. I was easily annoyed	1	2	3	4	5
16. I expected something bad to happen	1	2	3	4	5
17. I noticed gaps in my memory about client sessions	1	2	3	4	5

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Intrusion Subscale (add items 2, 3, 6, 10, 13)

Avoidance Subscale (add items 1, 5, 7, 9, 12, 14, 17)

Arousal Subscale (add items 4, 8, 11, 15, 16)

TOTAL (add Intrusion, Arousal and Avoidance Scores)

Intrusion Score _____

Avoidance Score _____

Arousal Score _____

Total Score _____

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