An exploration of secondary trauma effects in members of the Victoria Police Force.

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BA (Hons)

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Abstract

The purpose of the current study was to thoroughly examine the phenomenon of secondary traumatic stress (STS). STS is said to mirror the symptomatology of PTSD, such as intrusive thoughts, nightmares, and avoidance, and develops in professionals who assist and counsel the traumatised (Figley, 1995a). Prominent risk factors for the development of STS are said to include having one's own prior trauma history, dealing with victims of sexual abuse and working with traumatized children (Beaton & Murphy, 1995; Cunningham, 2003; Figley, 1995a), with the necessary conduit for STS development being empathic concern (Figley, 1995a). The current study investigated if secondary trauma could be determined in Victoria Police members and particularly in police officers working in sexual offences and child abuse units (SOCAU). Participants were 210 police officers (135 men and 75 women) with ages ranging from 20 to 55 years (men $M = 41.5$ years, $SD = 6.9$; women, $M = 36.8$, $SD = 7.04$). The current results revealed that there was strong convergence between scores on the Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis & Figley, 2004) and scores on the measure of Emotional Exhaustion (a subscale within the Maslach Burnout Inventory; Maslach & Jackson, 1986). Furthermore, none of the main theoretical antecedents (proposed by Figley, 1995a) predicted the development of STS and multiple regressions revealed that the same five variables (Alcohol Use, less Emotional Stability, lack of Social Support, Denial, and Turnover Intent) predicted both STS and Emotional Exhaustion to the same degree (accounting for 51% of the variance in each construct). The predictors themselves are not trauma specific, and have been studied extensively in the burnout literature. The

prevalence of Prior Trauma in police officers was not different from what could be expected in other populations and SOCAU did not appear to be a location that was especially risky for the development of Emotional Exhaustion, STS or PTSD when compared to other police work areas. In addition, qualitative responses indicated that administration issues, a lack of resources, internal politics and management issues were more concerning to police than victim stress. A re-evaluation of the definition and contributing factors to STS seems warranted, given the mounting research suggesting an overlap between burnout and STS. Future studies concerned with the possible psychological impact of working with trauma victims should incorporate organisational variables, in order to more comprehensively examine the phenomenon.

Declaration

I declare that this thesis does not incorporate without acknowledgement any material previously submitted for a degree in any university, or other educational institution; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

I further declare that the ethical principles and procedures specified in the document on human research and experimentation issued by the Psychology Department of Swinburne University have been adhered to.

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Chapter 1 Thesis Overview

Secondary traumatic stress (STS) was originally defined by Figley (1983) to describe the adverse psychological reactions that can happen to persons who have close contact with and want to help trauma survivors. Since this time, interest in the phenomenon of secondary trauma has increased with numerous research articles examining the potential impact of STS on close family members (Figley, 1995a; 1999b), nurses (Joinson, 1992), trauma counsellors, sexual abuse counsellors (Brady, Guy, Poelstra & Brokaw, 1999; Cunningham, 2003), social workers (Bride, Robinson, Yegidis & Figley, 2004; Cunningham, 2003), child protection workers (Meyers & Cornille, 2002), and emergency service workers and police (Figley, 1995a; 1999b; Follette, Polusny & Milbeck, 1994). In addition, interventions exist (e.g., Caraniche, 2005) which claim to prevent or treat secondary trauma. Such interventions are perhaps attractive to organizations seeking to minimize the risk of employee stress and the attendant costs.

Whilst secondary trauma was originally conceived of as a type of burnout, its definition has since broadened to incorporate the notion that experienced symptoms mirror the symptoms of post traumatic stress disorder (PTSD) with the exception that they are experienced vicariously instead of directly (Figley, 1995a). Additionally, it is proposed that STS can develop into secondary traumatic stress disorder (STSD; with identical qualifying criteria to that of PTSD). Certainly, the concept of secondary trauma (suffering psychological and emotional harm as a result of hearing about the trauma suffered by others) seems to make intuitive sense and possesses a certain degree of face validity. However, studies, described in the literature review concerning the phenomenon, have obtained inconclusive results concerning possible antecedents and

contributing factors. There also appears to be confusion about the distinction of secondary trauma from burnout, some researchers concluding that there is a great deal of overlap or convergence between the two constructs (e.g., Adams, Matto & Harrington, 2001; Deighton, Gurris & Traue, 2007; Perron & Hiltz 2006; Pickett, 1999; Wright, 2005), whereas others find sufficient distinction between them (e.g., Jenkins & Baird 2002; Kassam-Adams, 1999; Schauben & Frazier, 1995). In addition, a great many studies to date seem to be unpublished dissertations, making access to research difficult and the conclusions therein lacking the rigorous scientific review of published research.

Compounding these inconsistencies, issues and confusions, are the numerous articles (e.g., Little, 2007; Morrison, 2007; Rasmussen, 2005), books (e.g., Figley, 1995a; Rothschild, 2006; Stamm, 1999) and courses designed to recognise and remedy STS which seem to outnumber the amount of actual published empirical research into the construct. Solutions to employee stress are important, and this is certainly a very important area of research and practice. As Wright (2005) aptly points out, today's organisational climate protects employee well-being, understanding that work-related stress can impact upon a business's bottom line in terms of absenteeism, turnover and reduced performance. In most places, legislation exists (e.g., Occupational Health and Safety Act; Work Safe Victoria, 2004) that protects employees and makes organizations accountable if foreseeable harm (whether physical or psychological) to employees is not addressed.

Whilst there are various groups of persons who are said to be vulnerable to the effects of secondary trauma, few studies have focused on police despite this group being identified quite early on in the accumulating literature on STS. In Australia, case law

exists (discussed in Chapter 5), concerning the "foreseeable harm" to police officers who deal with the sexual and physical abuse of children in the course of their occupation. This is despite the court also finding that there was a lack of research on that particular population (State of New South Wales v Seedsman, 2000). Therefore this field of research is vitally important. If dealing with and treating traumatised persons is harmful, then steps may need to be taken to protect helpers, be they therapists, social workers, family or police officers. However, before the remedy is implemented, there needs to be cogent rigorous research providing scientific support for the existence of the phenomenon of secondary trauma (including support for its theorised model of development and theorised antecedents). This needs to be followed by research which meticulously tests the validity and reliability of any potential treatment whether preventative or corrective.

The present project was a thorough exploration of the phenomenon of secondary traumatic stress (STS), examining the construct itself and the proposed antecedents to its development. In particular, the current study examined if STS was an issue of concern for police officers (particularly those working in an area routinely dealing with sexual abuse and child abuse), and tested whether the current theory was able to predict STS in a police population. Whilst there are different terms describing secondary trauma (e.g., compassion fatigue, vicarious trauma; discussed in more detail in Chapter 3), the current study takes the position that the various terms essentially represent the same concept or condition. For the purposes of the current thesis, the predominant term that will be used when describing the deleterious effects of trauma work upon professionals is secondary traumatic stress (STS).

This thesis contains one study (comprised of quantitative and qualitative data) and consists of 9 Chapters. Chapter 2 describes the origins and theory of STS and its development, including Figley's (1995a) model of STS. Chapter 3 describes the differing nomenclature used to describe the phenomenon and the overlap that seems to be evident in the literature between measures of burnout and STS. Vulnerabilities which are believed to predispose individuals to experiencing STS are discussed in Chapter 4 and Chapter 5 puts the current project in context by examining the literature about Police, specifically Police stress, culture and how this relates to STS. Chapter 6 discusses the present study and details the project aims and research questions. The methodology is described in Chapter 7, with results presented in Chapter 8. The final Chapter discusses findings from the current study, including methodological concerns, limitations and implications of research findings.

Chapter 2 Secondary Traumatic Stress

2.1 Trauma, more generally

The idea that trauma can cause significant distress and change a person's worldview and outlook on life is nothing new and is perhaps poignantly illustrated by the poet Wilfred Owen. He initially composed poetry that was beautifully descriptive of the world around him in a Keats like fashion. However, after his exposure to the horrors of World War I, Owen's outlook dramatically changed, and his subsequent war poetry exudes an undeniable cynicism and bitterness about the world (White, 1969). Certainly, the adverse psychological impact of trauma upon soldiers has been recognised for some time, with a number of post war veterans evidencing symptoms such as increased nervousness, fatigue and nightmares (Kaplan & Sadock, 2003; Sexton, 1999). During the American Civil War, references were made to "soldier's heart". Other terms appeared such as "combat neurosis" in the 1900's, "shell shock" during World War I and "combat fatigue" during World War II (Kaplan & Sadock, 2003; Sexton, 1999).

Whilst war is not the only trauma suffered by humans, it was the psychological plight of a large number of Vietnam War veterans that provided the impetus for the concept of post-traumatic stress disorder (PTSD; Kaplan & Sadock, 2003). Since PTSD was formally recognised as an anxiety disorder in the Diagnostic and Statistical Manual of Mental Disorders (*DSM–III*; American Psychiatric Association, APA, 1980), research into victim reactions to trauma has dramatically increased (e.g., Matsakis, 1994; Sexton, 1999). Indeed, there is now a great deal of research that has examined the psychological reactions of victims to a range of traumatic events such as violent crime, sexual abuse and natural disasters in addition to war trauma (e.g., Cortina & Kubiak, 2006; Kohn, Levav,

Garcia, Machuca & Tamashiro, 2005; Orth, Cahill, Foa & Maercker, 2008). PTSD is reputed to be one of the most prevalent Axis I disorders (Bradley, Greene, Russ, Dutra & Westen, 2005) with lifetime prevalence rates estimated to be as high as 8-9% and a further 5 – 15% experiencing sub-clinical forms of the disorder (Kaplan & Sadock, 2003; Kessler, Sonnega, Bromet, Hughes & Nelson, 1995). Nevertheless, not everyone exposed to a traumatic event develops PTSD, so some research (e.g., Carlier, Lamberts, Berthold & Gersons, 1997; Hodgins, Creamer & Bell, 2001; Weisaeth, 1998) focuses on individual vulnerabilities which may render individuals more susceptible to PTSD rather than just considering the properties of the event itself.

Developing alongside the research on PTSD is the more recent idea that professionals or others, who assist the traumatised, can be harmed (psychologically and emotionally) by hearing about and knowing about the trauma (Arvay, 2001; Figley, 1995a; McCann & Pearlman, 1990; Sexton, 1999). Those at risk of such harm are said to include close family members (Figley, 1995a; 1999b), nurses (Joinson, 1992), trauma counsellors, sexual abuse counsellors (Brady et al., 1999; Cunningham, 2003), social workers (Bride, et al., 2004; Cunningham, 2003), child protection workers (Meyers & Cornille, 2002), emergency service workers and police (Figley, 1995a; 1999b; Follette et al., 1994). Some of the consequences for these secondary victims are said to include experiencing similar trauma symptoms to the direct victims, such as intrusive thoughts, nightmares, and avoidance (Figley, 1995a). In addition there may be disruptions to the individuals' beliefs about the world and about their own personal vulnerability (McCann & Pearlman, 1990). Ultimately, as the disruption of beliefs and other symptoms encroach upon the professional's personal life, relationships with family and friends can be

negatively affected (Pyevich, Newman, & Daleiden, 2003; Salston & Figley, 2003; Sexton, 1999).

There have been several attempts to conceptualise or explain these theorised harmful effects upon the helpers. Some researchers use terms such as traumatic countertransference, or contagion, and suggest that somehow the effects of trauma are like a disease and can be transmitted in a virus like fashion to family members, friends, work colleagues and professional helpers of the victim (Arvay, 2001; Ortlepp & Friedman, 2002). More recently, other terms have been used to describe the effects on professionals and therapists including burnout, vicarious traumatisation (Arvay, 2001; Hesse, 2002; Pearlman & Saakvitne, 1995a, 1995b; Salston & Figley, 2003; Sexton, 1999), compassion fatigue, and secondary traumatic stress (Figley, 1995a, 1995b). These differing terms will be discussed in Chapter 3.

2.2 Secondary traumatic stress (STS) – theoretical origins

Secondary trauma was originally defined by Figley (1983) to describe the adverse psychological reactions that can happen to persons who have close contact with or want to help trauma survivors. Figley (1983) originally believed this phenomenon to be a kind of burnout and initially applied it to families of traumatised persons, believing them to be secondary victims. Figley (1999b) even went so far as to refer to secondary traumatic stress in families as "family burnout" (p.44). Research findings in the seventies seem to strongly suggest that traumatised persons have unique effects on those around them, such as wives and children of prisoners of war, who often displayed severe psychological and psychophysiological symptoms (e.g., Hall & Simmons, 1973). Certainly, children of

Holocaust survivors were found to have an increased prevalence of PTSD even though their exposure to traumatic events was the same as children whose parents were not Holocaust survivors (Yehuda, 1999). Some trauma therapists even report feeling that they have assumed the "pathology" of their clients, experiencing their symptoms and absorbing their distorted world and familial views (Figley, 1995a).

Since 1983, Figley has broadened his theory of secondary trauma (beyond the effects on friends and family of the traumatised) to professionals who assist trauma victims, with an initial emphasis on therapists and counsellors (e.g., Figley 1995a; Adams, Boscarino & Figley, 2006) and later police (Figley, 1999b). There are said to be three content domains of Secondary Traumatic Stress (STS) symptoms: a) re-experiencing the trauma event from the primary victim's perspective; b) avoidance, withdrawal and/or emotional numbing in relation to reminders of the event; and c) persistent arousal. These content domains correspond to criteria B, C and D respectively of the PTSD diagnosis in *DSM-IV* (APA, 2000).

Criterion B, re-experiencing the trauma, can include one of the following symptoms: recurrent and intrusive distressing recollections or dreams of the event; feeling as though the event were recurring; and/or intense psychological distress or physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the event (APA, 2000; Bride, 2007). Criterion C, avoidance symptoms, relates to persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma) and can be indicated by three or more of the following symptoms: efforts to avoid thoughts, feelings or conversations connected with the trauma; efforts to avoid trauma associated activities,

places and/or people; an inability to recall significant aspects of the trauma; reduced interest or participation in significant activities; feelings of detachment from others; restricted experience of affect, and/or a sense of a foreshortened future (APA, 2000; Bride, 2007). Criterion D involves persistent arousal (again not present before the trauma) reflected by two or more of the following symptoms: difficulty falling or staying asleep; irritability or outbursts of anger; difficulty concentrating; hypervigilance, and/or exaggerated startle response (APA, 2000; Bride, 2007). In addition to the above three content domains, other general symptoms that can also present themselves in STS include fear, anger, anxiety and depression (Ting, Jacobson, Sanders, Bride & Harrington, 2005). Bride (2007) describes STS as a syndrome of symptoms similar to those of PTSD. STS therefore is primarily focused on observable symptoms and is based on the diagnostic conceptualisation of PTSD as it appears in the *DSM-IV* (Figley, 1995a; Pearlman & Saakvitne, 1995a).

For post-traumatic stress disorder (PTSD), there is a prerequisite requirement for a person to have been exposed to a traumatic event (APA, 2000). Initially, in the *DSM III,* events were defined as traumatic for the purposes of diagnosis if they were "outside of the realm of usual human experience and would evoke significant distress in the vast majority of people" (APA, 1980; Brunet et al., 2001, p.1480). Sadly, such events (e.g., violent personal assaults, terrorism, ethnic violence, or natural disasters) are statistically speaking, not rare (Brunet et al., 2001; Stamm, 1999), and more than half the adults in the United States are expected to experience at least one traumatic event in their lifetime (Kessler et al., 1995). Thankfully all those people do not develop PTSD and this may be

why the revision of PTSD Criterion A (definition of the traumatic event) in the DSM-IV (APA, 1994) included a more subjective appraisal of the event.

However, some researchers argue that defining a traumatic event using a subjective appraisal artificially inflates the exposure rates and is tantamount to conceptual bracket creep (McNally, 2003; Southwick & Charney, 2004). Nevertheless, the 1994 revision also expanded the definition of trauma to include "learning about" (p.463) a traumatic event occurring to family or close associates. Criterion A1 requires that the event must represent a serious threat to the self or others, and criterion A2 that the initial response to the trauma invokes fear, helplessness or horror. These criteria are still present in the current fourth edition and revised text of the *DSM* (*DSM-IV-TR*; APA, 2000). In addition to the event and the initial response to it, the current definition of PTSD in *DSM-IV-TR* requires that the symptoms (per criterion B, C & D) must last for more than a month (criterion E) and significantly affect important areas of the sufferer's life, such as family and work (criterion F; APA, 2000).

Figley (1995a) argues that STS can develop into Secondary Traumatic Stress Disorder (STSD) and that the symptoms experienced by secondary victims are reported to be almost identical to those of PTSD; with the obvious exception that they were not directly exposed to the trauma, rather they heard of or witnessed the trauma by indirect exposure via the victim (Brady et al., 1999; Figley, 1995a; Follette et al., 1994; Jenkins & Baird, 2002). Thus the symptoms such as intrusive thoughts, nightmares and flashbacks relate to stories that clients have told the therapist or professional rather than being directly experienced and accessed from their own memories. Figley does propose however, that like PTSD, the symptoms for STSD should last at least one month and the

disturbance should cause considerable distress affecting important areas of the person's life. However, not everybody develops PTSD in response to traumatic events and similarly not everyone exposed to traumatised clients will meet the criteria to be diagnosed with the full blown disorder of STSD (Price, 1998) and may instead evidence only some of the symptoms or experience them for shorter duration than is required for the disorder. In such cases a person can be considered to be experiencing STS.

Prevalence rates for STS and STSD are not entirely clear as yet, with only a few studies addressing this issue and often using different measures to assess STS. Prevalence rates for STSD are difficult to establish, partly due to the lack of coherence in definition and inconsistent measures used to measure the phenomenon. Often too, studies only report percentages of respondents endorsing sufficient items for clinical significance of each sub-scale of PTSD such as the Intrusion sub-scale (e.g., Hyman, 2004). Nevertheless, Conrad (2006) reported that 50% of his sample of child protection workers suffered from "high" or "very high" levels of STS (using the Compassion Satisfaction/Fatigue Self-Test (CFST; Figley & Stamm, 1996). However, only one study was found which specifically examined prevalence of STS using the Secondary Traumatic Stress Scale (STSS; Bride, 2007). Bride (2007) examined self-report responses from 282 social workers who identified that most of their clients had suffered trauma. Using the STSS which corresponds to the B, C and D criteria for PTSD, he found that 15.2% would meet diagnostic criteria for PTSD (or in this case STSD) and further that 55% met the criteria for at least one of the core symptom clusters of intrusion, avoidance or arousal.

2.3 STS Development

Figley's model. Figley (1995a, 1995b) has theorised that empathy is an important dynamic in the transmission of trauma between the primarily traumatised person and the secondarily traumatised person. He believes the reason for such a strong connection is that the process of empathising with someone helps us understand the experience they have had from the perspective of having lived in their shoes. Thus in the case of a traumatic experience we understand the trauma but are at risk of feeling traumatised as part of understanding the experience. Research indicates that females report feeling more empathy for clients and victims than males do (Davis, 1983; 1994), which may also partly explain why females report more STS symptoms than males (e.g., Kassam-Adams, 1999; Meyers, 1996) if empathy is a crucial factor in the development of STS.

In Figley's (1995a) model (See Figure 1) he posits that there are six interacting variables that contribute to experiencing compassion stress (secondary traumatic stress) with a) "empathic ability" being the starting point. Figley defines empathy as the "ability to notice the pain of others" (p.252) which he believes is closely linked to b)"emotional contagion", defined as experiencing the feelings of the sufferer as a function of being exposed to the sufferer. Figley also sees empathic ability as being linked to c) "empathic concern" which he sees as being the motivation to act, to assist the traumatised person. Thus from his perspective, empathic ability and emotional contagion contribute to the effort a person exerts to help relieve another person's suffering. This effort is operationalised as the d) "empathic response". The extent to which a person then suffers from secondary traumatic stress then depends on the extent to which the person is satisfied with their efforts, e) "sense of achievement" and the extent to which the person

can distance or detach themselves from the traumatised person's distress, f) "Disengagement" after making their empathic response.

Compassion fatigue in the sense of Secondary Traumatic Stress Disorder is said to result from prolonged exposure to compassion stress, that is, feeling an ongoing sense of responsibility for the care of the traumatised person with very little relief. Both the degree of prolonged exposure and compassion stress can increase traumatic recollections, which if compounded by a degree of life disruption can contribute to the development of STSD. Figley (1995a) does not allow for prolonged exposure impacting directly upon Traumatic recollections in his diagram (see figure 2). The reason for this is not apparent.

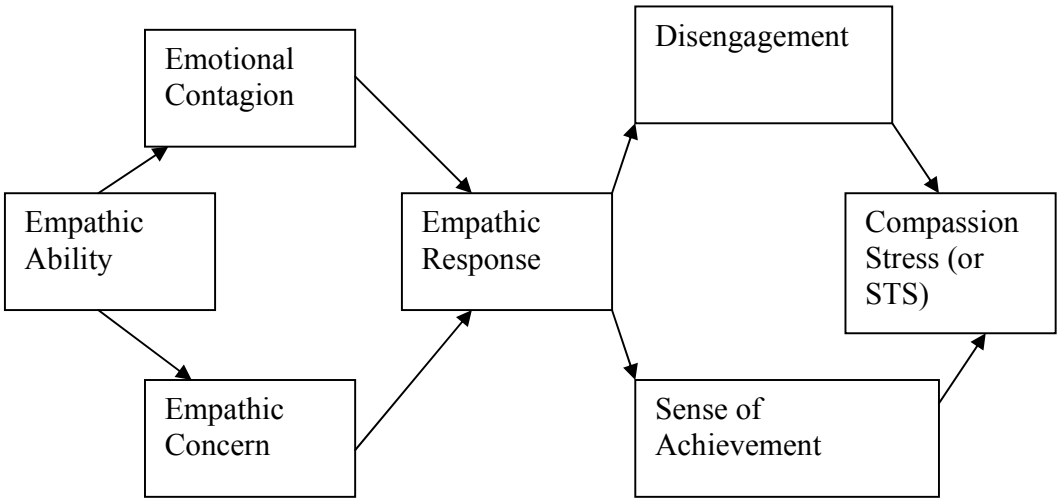

Figure 1. Figley's Model of Compassion Stress (STS)
Adapted from Figley, 1995a p. 250

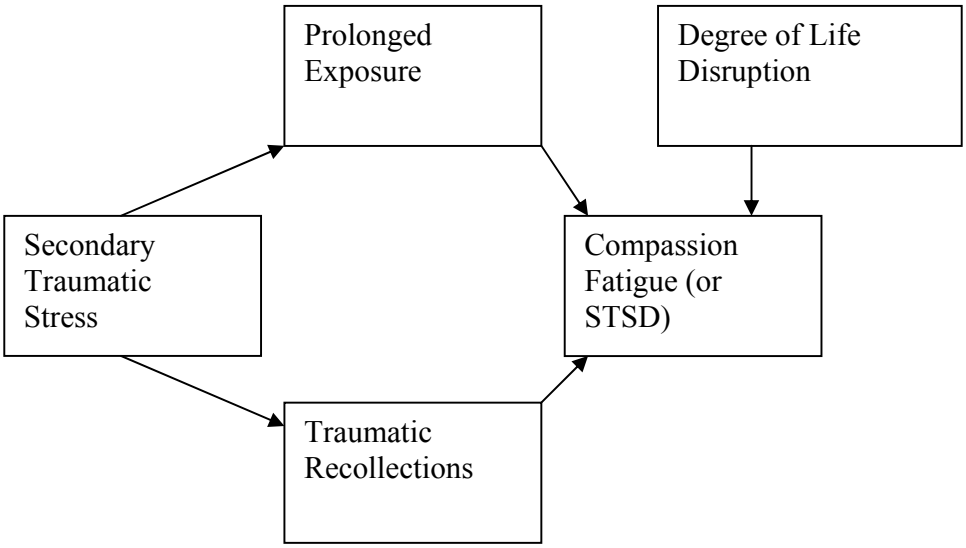

Figure2. Figley's Model of Compassion Fatigue (STSD)
Adapted from Figley, 1995a p. 251

2.4 Empathy

As empathy is proposed to be a fundamental factor in the development of secondary traumatic stress, it may help to examine the construct more closely. Empathy is a multifaceted construct, with a rich history in terms of interest and research from scholars with a variety of backgrounds such as psychologists, anthropologists and theologians (Davis, 1994). Adam Smith (an economist and moral philosopher) was one of the first to specifically address the concept of empathy in 1759, though at that point in time what we know as empathy was referred to as "sympathy" (Davis, 1994). He described sympathy as "the shared feeling that results when we observe other people in emotional states, the compassion we feel for their sorrow, the resentment when they are slighted, and the joy when they triumph" (cited in Davis, 1994 p. 2). It was Smith's belief that this affective bond, which he termed a "fellow feeling" between people, is

what restrains persons from behaving in totally egotistical ways. Thus, initially at least, empathy was conceived of as an affective construct matching the emotional state observed in another by imagining oneself in another person's situation. Accordingly the result was to feel emotions similar, though weaker than those of the observed person (Davis, 1994).

Much later in the early twentieth century, psychologists and researchers introduced a cognitive aspect to the concept of empathy arguing that there was more to understanding other people's feelings than just sharing them. George Herbert Mead (1934) emphasised the necessity of being capable of taking on the role of another person to understand their perspective and Jean Piaget (1977) believed that people acquire the ability to decentre (to differentiate between their own experiences and those of others) as they develop and mature. Contemporary views of empathy tend to incorporate both cognitive and affective processes in their understanding of the concept of empathy (e.g., Hoffman, 1987), often with a maturity aspect intertwined with the concept. That is, as children develop their cognitive ability to differentiate themselves from others they move from personal distress at another's affective state to more advanced feelings of concern or compassion for others (Hoffman, 1987). Davis (1994) also differentiates between the processes of empathy (such as role taking and cognitive abilities) and outcomes (the affective responses and behavioural responses to the observed person) in his extensive organisational model of empathy.

In Davis's (1994) view, empathy is a complex construct which can be affected and influenced by factors such as the person (characteristics of the person, previous learning history, socialisation, intellectual capacity and stable dispositional tendencies),

the situational context (e.g., weak or helpless target, family member, degree of similarity between target and observer) and the processes (innate perceptual ability, cognitive abilities such as perspective taking and ability to suppress one's own egocentric perspective of events). Most importantly Davis also differentiates between parallel and reactive outcomes; parallel meaning a reproduction in the observer of the target person's feelings; and reactive, pertaining to responses that differ from the observed affect. Within the latter construct, Davis includes "Empathic Concern" which relates to feelings of compassion for others and "Personal Distress", which he defines as "the tendency to feel discomfort and anxiety in response to needy targets" (p. 18). In Davis's view Empathic Concern is a more mature form of empathic outcome whereas Personal Distress is a less mature more self-centered reaction.

Certainly for therapists, empathy is a necessary tool employed in order to assist clients in their recovery from traumatic events (McCann & Pearlman, 1990; Rogers, 1980; Sexton, 1999; Wilson & Lindy, 1999). Moreover, empathy is employed and has been discussed for a wide range of therapies, though the relative emphasis upon empathy differs according to the discipline of treatment. Carl Rogers emphasised and wrote a great deal about the need for empathy on behalf of the therapist when treating clients. However, while he agreed that there was a need to view the world as a client would see it, he seemed to imply that the therapist should not share the exact emotion of the client. Rather they should understand it and communicate their understanding of the experience to the client. In his words empathy includes "….communicating your sensings of the person's world as you look with fresh and unfrightened eyes at elements of which he or she is fearful" (Rogers, 1980, p.142). Perhaps in this sense, what Rogers is describing is

more akin to the more mature Empathic Concern and compassionate element of empathy rather than the discomfort felt if one is more influenced by the Personal Distress aspect of empathy.

While one of the fundamental assumptions of Figley's model of STS is that empathy is integral in its development (Figley, 1995a, 1995b; McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995a; Sexton, 1999), somewhat surprisingly, few studies examining STS have included measures of empathy or examined its role. Only four studies, Marmaras (2001), Moosman (2002), Walton (1997), and Wertz (2001) appear to have measured empathy empirically and its effects on PTSD symptoms (used to measure STS) in trauma therapists. All of these studies have been published in Dissertation Abstracts International and none appear in any psychological journals to date. No studies involving the empirical measurement of empathy and its relationship to STS seem to have been carried out on police or other emergency services personnel. None of the major theorists in the areas of secondary and vicarious trauma appear to have empirically examined the contribution of empathy to the development of STS or Vicarious Trauma.

Of the four studies that have examined empathy, three used Davis's (1983) Interpersonal Reactivity Index (IRI) to measure empathy style. Davis actually measures four types of empathy, Perspective Taking, Empathic Concern, Personal Distress and Fantasy. As mentioned previously, Empathic Concern is considered to be a more mature form of empathy allowing compassion for others, and Personal Distress is considered a more ego-centric form of empathy where an observer experiences distress in response to witnessing the trauma or distress of others. Perspective Taking measures the cognitive ability to take another's perspective, whereas the Fantasy scale examines a person's

ability to identify with or take the perspective of fictional characters, be they in books or films.

Both Walton (1997) and Moosman (2002) hypothesised that STS symptoms (which they measured using PTSD scores) would be related to Empathic Concern; however this did not prove to be the case. Walton's study of 165 therapists found that it was the Personal Distress rather than the Empathic Concern scale of the IRI that correlated with PTSD symptoms in therapists, accounting for 3% of the variance in experienced PTSD symptoms. Similarly in Moosman's study of 183 therapists, Personal Distress empathy was again significantly correlated with PTSD symptoms and accounted for 6% of the variance in PTSD symptoms in therapists. Whilst Marmaras (2001) found no relationship between empathy styles and PTSD symptoms such as Hyper arousal, Intrusion and Avoidance, she too found that Personal Distress empathy was linked to vicarious trauma in the context of constructivist self development theory. Her results indicated that Personal Distress was also the best predictor of disruptions in cognitive schemas. Both Walton (1997) and Moosman (2002) concluded that therapists with less mature empathy styles were at a higher risk of becoming personally distressed by their clients' trauma. Walton specifically deduced that Empathic Concern, being the more mature form of empathy, allowed the therapist to better support the client with compassion due to an appropriate emotional boundary being in place. On the other hand she theorised that the Personal Distress style of empathy occurred when boundaries between the client and the therapist were ineffective or missing.

Such boundaries may be affected when therapists over identify with clients which theoretically can occur when some of the vulnerabilities to STS are present, such as past

trauma events or if the trauma has occurred to a child and the therapist has children. This seems to have some support from Wertz's (2001) study of empathy and PTSD symptoms. Higher scores on Task Absorption (the tendency to become overly absorbed in a task, as measured by the Absorption Inventory of the Multidimensional Personality Questionnaire) along with Emotional Empathy (measured by the Questionnaire Measure of Emotional Empathy) were both correlated with higher PTSD scores. Wertz concluded that therapists who become overly absorbed in their client's difficulties risk becoming secondarily traumatised by developing PTSD symptoms in response to their clients' trauma.

Interestingly, one study of 290 psychologists using the IRI (Hall, Davis & Connelly, 2000) found that therapists who were able to use a more mature empathy style (Empathic Concern) were able to respond compassionately to others, rather than focusing on their own Personal Distress and they generally viewed themselves as more effective and were more satisfied with their work than therapists unable avoid their own Personal Distress. The current study examined the role of empathy and the development of STS symptoms in Victoria police officers to see whether Personal Distress empathy as measured by the IRI is correlated with increased STS symptomatology, as was the case in the studies with therapists.

Chapter 3 Secondary Traumatic Stress and Related Concepts

As with many psychological concepts, the field of secondary trauma has had its struggles with naming and succinctly capturing the phenomenon and whilst there has been a great deal of research into the topic, it has often been labeled using other terminology and nomenclature. A review of the most common terms follows.

3.1 Compassion Fatigue

The term Compassion Fatigue was coined by Joinson (1992) to describe the effects of secondary trauma combined with burnout type symptoms on a nursing population. Compassion Fatigue as a term was used in preference to STS in the early nineties as it was considered more "palatable" in comparison to STS (Stamm, 1999), the former being associated with caring and being almost honourable, whereas the term STS was considered "harsh" and not a term people would readily accept being linked with their ability to care (Stamm, 1999). Figley (1995a) suggested that whilst STS was a more exact description of the phenomenon of secondary trauma, compassion fatigue could be appropriately utilised as a substitute, as this implied a normative reaction as opposed to the stigma of underlying pathology. Unfortunately, the term compassion fatigue was used by the media in the mid nineties referring to a much less virtuous association, namely public indifference regarding homeless people (Stamm, 1999) and accordingly its use to describe STS then declined. Essentially there is no difference between STS and compassion fatigue, as used in the secondary trauma literature, though some authors choose one term over the other for either clarity of the description (in the case of STS) or to avoid stigmatising sufferers (using compassion fatigue; Bride, 2005, personal communication).

3.2 Countertransference

Whilst countertransference is related to secondary trauma and may even act to intensify secondary traumatic reactions (particularly if therapists have prior trauma issues in their own lives), it is conceptually distinct (Figley, 1995b; Pearlman & Saakvitne, 1995b; Trippany, White Kress & Wilcoxon, 2004). Originating from the psychodynamic tradition of therapy, countertransference refers to the therapists' own emotional reactions to the client and occurs in part due to the therapist's own life experiences (Figley, 1995b). The notion of countertransference in therapy has a long history and is beyond the scope of this study, save for a brief account. It was Freud in 1910, who first referred to "countertransference" as the feelings towards the patient resulting from the patient's influence on the therapist's unconscious feelings (Clarkson & Nuttall, 2000). However, rather than viewing this as an empathic response that could be useful in therapy, Freud regarded countertransference as an interference to therapy, as the therapist's own pathology and something to be overcome (Clarkson & Nuttall, 2000). Later, theorists believed that countertransference, as well as being somewhat unavoidable, was useful in therapy, enabling the therapist to recognise the client's predominant relationship difficulties when clients transfer (or project) their feelings towards important others onto the therapist (Klein, 1952; Racker, 1968). Pearlman and Saakvitne (1995b) favour a more contemporary and inclusive definition of countertransference incorporating the emotional, ideational and physical responses that a therapist has to the client or their clinical material and the therapist's conscious and unconscious defenses against the emotions, inner conflict and associations arising from those responses.

However countertransference reactions on behalf of the therapist are not specific to trauma, can occur in other contexts and are not necessarily negative emotional reactions. Herman (1992) delineates between regular countertransference and what he refers to as "traumatic countertransference", that is, the countertransference reactions experienced by therapists when their history of traumatic events is triggered in the therapy session with clients. Wilson and Lindy (1994) propose that there are two specific types of countertransference reactions experienced by trauma therapists, namely avoidance reactions and over-identification reactions. Avoidance includes denial, minimisation, distortion, counter phobic reactions, detachment and disengagement from an empathic response, whereas over-identification includes idealisation, enmeshment, and excessive support for the client in addition to guilt about being unable to provide the client with adequate assistance (Sexton, 1999; Wilson & Lindy, 1994). Pearlman and Saakvitne (1995b) believe that in the context of therapy at least, countertransference reactions can be useful in helping the therapist gain a better understanding of the client's feelings when the therapist experiences their anger, fear, grief, shame and self-doubt.

Secondary traumatic stress, however, is said to be theoretically distinguishable from countertransference because it is a traumatic reaction to specific client presented material (Figley, 1995a) and whilst a prior trauma history may increase the likelihood of STS symptoms, such a history is not a pre-requisite. However, at least as a mechanism, countertransference may explain how such strong emotional reactions to trauma are transmitted. Indeed, Arvay (2001) speculates that there may be a link between professionals who frequently experience being affected by their clients' traumatic material and dealing with their own countertransference issues, as these professionals did

not seek supervision or personal therapy despite identifying countertransference. If this link is correct, police may be particularly vulnerable to being affected by working with traumatised victims. Whilst therapists might be aware of the mechanisms of countertransference, police officers possibly will not be so aware, thus the impact of their own prior trauma upon their reactions to victims they may deal with might be hidden from their own understanding of the situation.

An interesting extension to the countertransference theory suggests that powerful unconscious processes exist in human service organisations, which if they remain hidden can transfer from individuals within the organisation to the organisation itself. This effect is said to be particularly strong in a distressed client group and can result in the organisation mirroring the issues of the clients (Moylan, 1994). Effectively the argument contends that the organisation could develop distorted, dichotomous ways of seeing the world, for example as good and evil or us versus them (Moylan, 1994; Sexton, 1999). Nevertheless, whilst countertransference may possibly capture some aspect of how secondary trauma develops, the term is, of itself, not sufficient to describe the total experience of STS.

3.3 Burnout

Perhaps because of the connection between secondary trauma and the workplace, 'burnout' has been another term used to try to describe secondary trauma. However the exact relationship between burnout and secondary trauma is unclear, with the term sometimes being used synonymously with STS in the literature (e.g., Figley, 1983, 1999b) and at other times, as a point of differentiation (e.g., Figley, 1995a). Burnout was a term first used to describe the effects of chronic drug abuse in the 1960s and was later

applied to describe a condition of occupational exhaustion by Freudenberger, a New York City psychoanalyst (Freudenberger, 1974; Grosch & Olsen, 1994). Burnout has been described as "a state of physical, emotional and mental exhaustion caused by long term involvement in emotionally demanding situations" (Pines & Aronson, 1988, p.9) and is commonly ascribed to the deleterious psychological effects of 'people work'. Burnout is said to be characterised by three major aspects, a) Emotional Exhaustion (feeling over-extended and exhausted by one's work); b) Depersonalisation (insensitive behaviours directed towards clients or victims); and c) Reduced Personal Accomplishment (negative self-evaluations such as feeling ineffective and incompetent (Maslach & Jackson, 1981, 1984, 1986; Wright & Cropanzano, 1998). Dollard (2003) describes burnout as being caused by "prolonged exposure to chronic interpersonal stressors on the job from working with troubled people" (p.15).

It is often reported that it is the most idealistic of workers who have a propensity towards experiencing burnout (Pines & Aronson, 1988), perhaps when reality falls short of their high expectations. In this way too, it seems that STS has another commonality with burnout, Figley (1995a, 1995b) reporting that symptoms occur in those professionals who care the most and are most effective. Cerney (1995) also expressed the opinion that a contributing factor to STS is the belief by therapists of almost perfectionistic practice (always being competent and serving all who need help). This implication seems to suggest that idealistic expectations either of one's own performance or ability to help, and subsequent failure to meet those expectations or to help the victim, may be implicated in STS in a similar manner to burnout.

Though therapists can suffer burnout, often as a result of several interacting conditions such as organisational climate, workload and empathic engagement with difficult clients, it may also occur within persons of any profession and is not limited to those dealing with trauma victims (Trippany et al., 2004). STS on the other hand is said to be specific to trauma work (Brady et al., 1999; McCann & Pearlman, 1990) and unlike burnout, which emerges gradually, STS may emerge suddenly and without warning, with symptoms that often seem disconnected from real causes (Figley, 1995a; Figley 1995b; Trippany et al., 2004). However, this idea of the sudden emergence of STS contrasts with Figley's (1999b) later position about the development of STS in police, in which he suggested that prolonged exposure to duty related stressors of all sorts will lead to STS. Other evidence also seems to imply that STS can emerge in the context of current and cumulative exposure to traumatised clients rather than being a response to just one event (Brady et al., 1999). Accordingly, the current position appears to be that STS can emerge suddenly or can develop over time, giving a degree of malleability to the construct.

Some research points to organisational factors (often linked to burnout) that are also implicated in STS symptoms. For example, Ortlepp and Friedman (2002) found that program coordination, poor self-efficacy, stakeholder commitment and perceived lack of social support were significantly related to counsellors' experience of STS symptoms and their role satisfaction. Some studies have found that lower income appears to increase the likelihood of STS symptoms (Adams et al., 2001; Chrestman, 1999). Additionally, Hallet (1996) found that perceived job status was also related to PTSD symptoms (used to measure secondary trauma) in her study of sexual abuse and homicide detectives, with lower perceived job status (in sexual abuse detectives) leading to increased perceptions of

trauma. Perhaps this indicates that, like burnout, there may be some connection between the organisational environment and experience of STS, suggesting that it may be more that just a reaction to trauma. In view of the fact that STS shares so many commonalities with the concept of burnout, it could be that STS is a sub-type or form of burnout.

In contrast, Jenkins and Baird (2002) found that there was only moderate convergence between the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986) and scores on two measures of secondary trauma, the TSI scale (Pearlman, 1996) and the Compassion Fatigue Self-Test (CFS; Figley, 1995a; Note: the CFS contained 17 items relating to burnout and 23 relating to compassion fatigue or secondary trauma). Jenkins and Baird (2002) interpreted these results as providing sufficient discrimination between the concepts of burnout and secondary trauma. However, in their study, they used the summed scale of the MBI (not recommended by Maslach & Jackson, 1986) and compared this to the total Compassion Fatigue Self-Test (CFST) score when assessing construct validity. A perusal of their correlational tables reveals that the MBI's Emotional Exhaustion scale alone correlated with the total CFST at $r = .58$, a strong correlation if we use Cohen's (1988) guidelines for assessing the strength of a relationship between variables. Despite the commonalities and potential overlap between STS and burnout, most of the literature concerning secondary trauma seems to accept that there is sufficient distinction between the two concepts and that burnout is conceptually distinct from secondary traumatic stress (Arvay, 2001; Figley, 1995a, 1995b; Kassam-Adams, 1999; Pearlman & Mac Ian, 1995; Schauben & Frazier, 1995).

However, in contrast to the position that burnout is sufficiently distinct to secondary traumatic stress, other research is emerging which points to a convergence in

the two constructs. Adams et al. (2001) found that there was a lack of clear distinction between burnout and vicarious trauma in their study of 185 clinical social workers, with a significant overlap between scores on the Maslach Burnout Inventory (Maslach & Jackson, 1986) and the TSI scale as a measure of vicarious trauma, suggesting that the distinction between secondary trauma and burnout may not be adequate. Adams et al. (2001) also discovered that factors predicting greater burnout scores also predicted greater levels of vicarious trauma. These included being younger, lower perceived social support, and greater number of clinical contact hours worked per week. Deighton et al. (2007) also found that secondary trauma (measured by the Professional Quality of Life Scale; Stamm, 2005) correlated highly with burnout symptoms, in their study at $r = .82$, and specifically with Emotional Exhaustion at $r = .72$. Deighton et al. (2007) considered that there may be only one work-related syndrome that was manifested in both burnout and secondary trauma symptoms. Perron and Hiltz (2006) examined burnout and STS in 60 forensic interviewers of abused children and a perusal of their published scale inter-correlations table shows that the Secondary Traumatic Stress Scale (STSS; Bride et al., 2004) significantly correlates quite highly ($r = .63$) with scores on the Exhaustion sub-scale of the Oldenburg Burnout Inventory (OLBI; Demerouti, Bakker, Vardakou & Kantas, 2003).

Similarly, Wright (2005), in her doctoral thesis, studied 152 mental health professionals and found high convergence ($r = .61$) between the measures of burnout, using the Copenhagen Burnout Inventory (CBI; Borritz & Kristensen, 2001) and the STSS scale. Wright concluded that both scales appeared to be measuring the same phenomenon and that STS was in fact better predicted by the model for burnout than its

own theoretical model. Further clouding the boundaries between burnout and STS is that Figley himself initially referred to STS as being a form of burnout (Figley, 1983; 1995a) and referred to secondary traumatic stress in families as "family burnout" (Bride, 1999b p.44). Figley also more recently refers to STS (using the term compassion fatigue again) as "Emotional Exhaustion from working with traumatised clients" (Adams et al., 2006, p.103). However in the same article (Adams et al., 2006) the researchers (one of which was Figley) suggest that burnout is central to and a critical clinical feature of secondary trauma. Therefore one of the major aims of the present study was to examine the relationship between burnout and the STSS in order to clarify the issues of convergence that have arisen in the research to date. That is, are the constructs of burnout and STS sufficiently distinct from each other?

3.4 Vicarious Traumatisation and Constructivist Self-Development Theory

Unlike other concepts like burnout, vicarious traumatisation (VT) is a term that is applied exclusively to trauma work and is meant to describe and explain the deleterious consequences of trauma work on psychotherapists (McCann & Pearlman, 1990). Like STS, VT research studies focus on symptoms of PTSD as indicators of the effects of trauma work on the therapist. The concept of VT, though, goes further than the observable symptoms and places considerable emphasis on placing those symptoms in the context of the human experience in which meaning and relationship are central (Pearlman & Saakvitne, 1995a). VT describes the internal transformation that occurs within the trauma therapist or worker, as a result of empathic engagement with the trauma victim's experiences (e.g., hearing graphic recollections or re-enactments of

rapes, disasters or human cruelty). VT is seen as a normal reaction for those working with trauma victims rather than an indication of pathology (Munroe et al., 1995).

In particular, VT describes the changes that occur within the trauma worker that impact upon their view of the world (including their spirituality), themselves and others. These changes are purported to pervade a person's inter- and intra-psychic world (Pearlman & Mac Ian, 1995). Unlike STS which can arise suddenly, the inner transformation resulting from VT does not result from one particular therapy session, rather Pearlman and Mac Ian argue that the effects are cumulative, expanding over both time and in response to the number of traumatised clients seen. Also in contrast to STS, VT is theoretically driven and is conceptually placed within and explained by the constructivist self development theory (CSDT; Jenkins & Baird, 2002; McCann & Pearlman, 1990; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995a).

CSDT combines modern psychoanalytic theory (concerning the self and object relations) with social cognition theories and provides a developmental framework, which explains a person's reactions and adaptations to trauma as a result of an interaction between their own personalities (needs, coping styles and defences) and pertinent aspects of the traumatic events (Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995a). CSDT suggests that people understand life and life experiences through the filter of their cognitive schemas or perceptions (Pearlman & Saakvitne, 1995a; Trippany et al., 2004) and that such schema can be permanently altered by interacting with traumatised clients. Some VT research on therapists found that the more experienced therapists evidenced fewer disturbances in their cognitive schemas than therapists who were newest to the work (Pearlman & Mac Ian, 1995), which may be a logical counter-argument against the

permanency of such changes. Perhaps experience could contribute to therapists employing more effective strategies to guard against the deleterious effects of trauma work. However, as Pearlman and Mac Ian (1995) point out, an alternative explanation for the relationship between experience and disturbance in cognitive schemas could also be that the therapists who are unable to cope with the effects of trauma work leave the field prematurely.

Whilst the concept of VT is certainly more theoretically driven, complex and holistic than STS, the basic observable symptoms are the same and some of the pre-disposing vulnerabilities such as personal trauma history, current stressors and social supports remain the same. An inherent difficulty in researching such a comprehensive and holistic approach as VT would also be the necessity to measure cognitive schemas prior to trauma work and then again after a few years. Such an approach would attempt to reduce the influence of other factors influencing participants' changes to cognitive schema and to minimise retrospective self-reporting bias. Such a study is beyond the scope of the current project and so the current study focuses on the concept of secondary trauma as STS and relies on observable symptoms rather than exploring the effects of such trauma upon persons' cognitive schemata.

In summary, secondary trauma as conceived of by Figley (1983, 1995a) is meant to capture the phenomenon of adverse psychological reactions that can happen to people who work with trauma survivors. The symptom domains of STS are said to correspond to those of PTSD (e.g., a) re-experiencing the trauma, b) avoidance/emotional numbing and c) persistent arousal; Figley, 1995a). However, unlike PTSD, empathy is proposed to be the crucial conduit which allows STS to develop, with sense of achievement possibly

mitigating symptoms. Somewhat confusingly, STS may develop suddenly (Figley, 1995a) from a single exposure to a traumatised client and/or prolonged exposure to traumatised clients (1999b). Adding to the ambiguity are the differing terms used in the literature to depict the phenomenon (though these essentially represent the same thing) and the potential overlap between burnout and STS, with both constructs concerned with the deleterious effects of people work. The current project aimed to clarify some of these conceptual concerns.

Chapter 4 Vulnerabilities to STS

This Chapter details 11 vulnerabilities to STS, a) Prior Trauma, b) Professional Experience, c) Age, d) Having Children and Child Victims, e) Sexual Abuse Trauma, f) Caseload or Workload, g) Gender, h) Stress and Coping, i) Personality j) Social Support and h) Job Characteristic variables. All but two of these vulnerabilities (Personality and Job Characteristic variables) have been highlighted in the STS literature as important in the development of STS. The two vulnerabilities not highlighted in the literature thus far, seem to have been overlooked despite being implicated in its development. There is no one consistent measure of STS in the literature and it is to be noted that some of the literature (described in the following section) has used measures of PTSD to measure the phenomenon of STS.

4.1 Prior Trauma

There are many factors that have been considered to render individuals in some way susceptible to the development of STS. One such prominent vulnerability to developing STS includes prior trauma experienced by the helping professional (Figley, 1995a; Hallet, 1996; Karlsson & Christianson, 2003; Kassam-Adams, 1999; Lerias & Byrne, 2003; Nelson-Gardell & Harris, 2003; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995a; Price, 1998; Salston & Figley, 2003). This is somewhat concerning when Pope and Feldman-Summers' (1992) national survey results are considered. They found that of 500 clinical and counselling psychologists in the U.S.A., 69.9% of the women and 32.9% of the men had been either physically or sexually abused. This would suggest that a sizeable proportion of psychologists would be vulnerable to STS if prior

trauma is a contributing factor. The potential impact of prior trauma upon STS symptoms again parallels known vulnerabilities to developing PTSD, with prior trauma having been implicated in the experience of and severity of PTSD in the community. PTSD in adulthood has been associated with the experience of child abuse, parental poverty and parental separation or divorce before the age of 10 years (Davidson, Hughes, Blazer & George, 1991).

Cozolino (2005) expands the definition of trauma when considering prior traumatic events and their impact on a person's later vulnerability for PTSD. He suggests that for children, having a depressed mother, separated parents or living in a household with a high level of marital tension can also constitute trauma. Such stress and trauma in childhood can render a person more vulnerable to PTSD later in life due to the chronic changes that such events can produce in the availability and homeostatic regulation of neurochemicals, such as increases in norepinephrine, dopamine, endogenous opioids and glucocorticoids, and decreases in serotonin. These changes can occur if there is ongoing chronic stress in childhood. For instance high levels of norepinephrine increase the experience of anxiety, arousal and irritability and increases in dopamine result in hypervigilance and perceptual distortions when under stress. Lower levels of serotonin correlate with higher levels of depression, irritability, aggression and arousal whereas higher opioid levels lead to emotional blunting and depersonalisation (Cozolino, 2005). Such wide-ranging effects can render persons more likely to interpret events as stressful even if the subsequent stressors in their life are mild, and to be ready to view the world as a dangerous and threatening place.

In a study involving 188 trauma therapists, Pearlman and Mac Ian (1995) found that 60% reported a history of trauma and that those with such a history showed more negative effects from the work than those without a trauma history. The negative effects included increased intrusion scores on measures of PTSD and changes in the way the therapists viewed others. In Meyers's (1996) study of 205 child protection workers, 82% reported that they had suffered a traumatic event prior to taking up their current occupations and those with a traumatic history exhibited more current distress symptoms as well as STS symptoms. Similarly, Jenkins and Baird (2002) found that sexual assault and domestic abuse counsellors had increased STS symptomatology if they had a prior trauma history. In their sample 55% of 104 participants (95 of whom were women) had either sexual assault or domestic violence histories themselves, which on the face of it seems greater than the expected community estimates (usually of 1 in 4 women, relating to sexual assault; Elliot, 1992). Such findings led Pearlman and Saakvitne (1995a) to speculate that therapists with a trauma history might be attracted to working with traumatised clients. It may also be the case that therapists with unresolved trauma may over identify with clients, confusing their own healing with that of their clients (Hesse, 2002; Yassen, 1995).

Follette et al. (1994) studied trauma symptoms in mental health professionals (n = 215) and police officers (n = 343) and found contradictory results concerning prior trauma. Police who reported physical or sexual abuse during their childhood had significantly higher levels of trauma specific symptoms than did mental health professionals without such a history. However, prior history of trauma had no impact on trauma symptoms in the mental health professionals. Further, Follette et al. emphasised

that the percentage of their professionals who reported prior abuse was not different from what would be expected in the general community and that it did not appear that individuals with a history of child abuse were particularly likely to enter the mental health professions. However, they did find some evidence that a history of personal trauma seemed to influence the work activities of police. Police with a childhood abuse history reported higher proportions of sexual abuse investigation within their caseloads, suggesting that those police with a trauma history tended to be more drawn to highly traumatic work than police without such a background.

In a study of homicide and child sexual abuse detectives, Hallet (1996) actually found that there was a tendency for persons with personal histories of child abuse to work in units with high exposure to trauma and that those with such histories were more vulnerable to experience distress associated with prolonged exposure to traumatic material. Similarly, Buchanan, Stephens, and Long (2001) noted that their sample of 187 police recruits reported experiencing higher than usual (by community standards) numbers of traumatic experiences before entering the police service. This has led some researchers to suggest that police work may attract persons with unresolved traumatic stress (Stephens, Long & Flett, 1999), and that it is those officers most at risk of trauma related symptoms and early retirement from the police force due to subsequent exposure to trauma (Stephens et al., 1999).

Perhaps the police force may attract such persons due to their unconscious need to resolve the past issues by obtaining a different outcome to their own trauma in the present. Van der Kolk and McFarlane (1996) refer to this phenomenon of re-exposing oneself to situations similar to the original trauma as “compulsive re-exposure to the

trauma" (p.10-11), though they argue that instead of allowing the victim to gain mastery of the situation such repetition often results in further trauma and suffering. As with therapists, it is possible that police with traumatic histories may over identify with some victims, blurring the needs of the victims with their own.

Alternatively the attraction to work involving trauma, and a potential explanation for the impact of prior trauma upon STS, may be the result of a form of 'addiction' and over involvement with traumatic incidents. Research suggests that repetitive exposure to traumatic events can result in reinforcing excitatory states and result in addiction to high risk situations (Cozolino, 2005; Paton, Violanti & Schmuckler, 1999). Certainly the often stated belief by police of the environment as inherently dangerous would be a view readily embraced by persons who have already been exposed to a number of traumatic events (Paton et al., 1999). The link between addiction and trauma is theorised to occur due to the production of endogenous opioids during a stressful event that can lead to an increased sense of well-being. Thus some persons may feel calm and competent in threatening situations but find it difficult to cope with everyday "normal" life (Cozolino, 2005). Unfortunately, long term consequences of such a way of coping and living can often result in individuals becoming physically worn down and experiencing depression, exhaustion and various medical conditions (Cozolino, 2005).

Nevertheless, the relationship of prior trauma with the development of STS remains confusing and unclear. Schauben and Frazier (1995) found that prior history of sexual abuse had no effect upon the secondary trauma symptoms experienced by therapists working with sexually abused clients. Adams et al. (2001) also found that personal trauma history was not associated with secondary trauma (using the TSI scale).

Likewise Fama's (2003) study of 208 doctoral level trainee therapists found no relationship with prior trauma and vicarious traumatization and as previously mentioned, Follette et al. (1994) found no relationship between prior trauma history and mental health professionals' experience of trauma symptoms. In an attempt to synthesise the research on VT and STS (using an epidemiological method, "levels of evidence"), Baird and Kracen (2006) discovered that there was a reasonable amount of evidence suggesting a link between a prior history of trauma and the development of STS and also a reasonable amount of evidence to suggest that a prior history of trauma was not linked to the development of STS. However, three of the four studies that they used to offer reasonable evidence were unpublished doctoral theses. Similarly, two of the three studies used to offer evidence against prior trauma being linked to STS were unpublished doctoral theses. The third study used to offer reasonable evidence against the contribution of a prior history of trauma was Follette et al. (1994), which in actual fact had mixed evidence for and against dependent on the participants' profession. Accordingly, there appears to be contradictions and confusions in the research regarding the possible relationship of past history of trauma with the development of STS. The present study examined past history of trauma and STS and examined whether prevalence of prior trauma in police officers exceeds that of the general population.

4.2 Professional Experience

There have also been mixed results concerning the influence of experience upon symptoms of STS. Some research suggests that professionals who are the least experienced will be most likely to be at risk of suffering STS (e.g., Chrestman, 1999;

Pearlman & Mac Ian, 1995) whereas others find that cumulative experience of trauma can of itself contribute to a greater risk of STS symptoms (e.g., Brady et al., 1999; Kassam-Adams, 1999; Meyers & Cornille, 2002). Meyers' (1996) study of 205 child protection workers actually found increased STS symptomatology in workers who were more experienced and had worked in the field the longest. On the other hand, Moosman's (2002) study of 183 therapists found no relationship whatsoever between experience of secondary trauma symptoms and with work experience, though she concedes that the mean number of years of therapy experience for her participants was quite high (17.8 years) and this could have impacted on her results. Kassam-Adams (1999) also found no relationship between experience and secondary trauma symptoms in psychotherapists. Similarly, in their study of 60 Forensic Interviewers of abused children, Perron and Hiltz (2006) found no relationship between experience as a forensic interviewer and STS.

Given the conceptual similarities between STS and PTSD it is relevant that with regards to emergency service workers, Marmar, Weiss, Metzler and Delucchi's (1996) study found that experience was a factor in the incidence and severity of PTSD, though this seemed to be mediated by a particular coping mechanism. Younger emergency service workers were more likely to use dissociation at the time of trauma (known as peritraumatic dissociation), such dissociation being strongly linked to greater prevalence and severity of later PTSD (Hodgins et al., 2001; Marmar et al., 1996). Hodgins et al. (2001) also found that less experienced police officers were more likely to develop PTSD. Marmar et al. suggested that one reason to explain the susceptibility of less experienced officers to suffering more trauma symptoms could be that older more

experienced officers would be better trained and more experienced in dealing with trauma therefore more mentally prepared for such an event. Cunningham (2003) found that therapists who had more years experience with sexual abuse clients reported fewer disruptions in their cognitive schemas and similarly, Pearlman and Mac Ian (1995) found that less experienced (less than 2 years) trauma therapists suffered the worst distress and psychological reactions to their clients' trauma. The present study was designed to examine and clarify the impact of experience on the development of STS.

4.3 Age

Another factor that seems to contribute to the experience of STS symptoms is age (though potentially this factor may be confounded with experience); younger persons seem to be more vulnerable to STS (Arvay, 2001; Karlsson & Christianson, 2003; Lerias & Byrne, 2003). Younger emergency services personnel reported more intrusive images and greater physical symptoms, concerning the traumatic material they encountered, when they were off-duty than did older workers (Marmar et al., 1996). One explanation for this speculates that stressors might be perceived differently depending upon one's developmental stage (Ensel & Lin, 1998). Others suggest that it is probable that older persons may be in supervisory positions and are therefore less likely to be exposed to traumatic stress directly on a day-to-day basis unlike their younger colleagues (particularly relevant to emergency workers, Marmar et al., 1996). However, it is also possible that older people who have had more life-experience could be better equipped to deal with such situations, or that self-selection is operating, with severely traumatised individuals leaving their chosen profession prematurely (Pearlman & Mac Ian, 1995).

Certainly, some research seems to indicate that older more experienced workers tend to use better coping styles (Marmar et al., 1996). The current study investigated the possibility that age could be related to STS.

4.4 Having Children and Child Victims

The risk of developing STS symptoms may increase if one has children because of identification with the victim's plight (Beaton & Murphy, 1995; Brady et al., 1999), particularly if dealing with childhood trauma. Martin, McKean, and Veltkamp (1986) found that police officers' responses to stress were correlated with their degree of identification with the victim. Such over identification can occur when victims, by way of age or context can remind officers of relatives, friends or significant others.

Child victims are associated with increased distress and secondary trauma in both therapists and police officers alike, and it is speculated that being a witness to abuse perpetrated upon a child creates increased feelings of helplessness and horror and that those feelings of helplessness, along with over identification, contribute to secondary trauma (Lerias & Byrne, 2003). In addition to child abuse, dealing with victims of sexual trauma also seems to contribute to symptoms of PTSD (Martin et al., 1986).

4.5 Sexual Abuse Trauma

Cunningham (2003) found that therapists who worked with sexual abuse trauma rather than those working with cancer trauma, were more likely to suffer from symptoms of vicarious trauma, specifically with disruptions in cognitive schemas about trusting or holding others in high esteem. Schauben and Frazier (1995) reported that female counsellors who worked with a higher percentage of sexual abuse survivors reported

more PTSD symptoms and more secondary trauma than counsellors with fewer such survivors in their caseload. Similarly, Martin, et al. (1986) found that PTSD symptoms were significantly more prevalent among police officers dealing with rape victims and with the investigation of child abuse cases than for other stressful events. They also found that this effect was more prominent for female officers than for male officers. The current study included police officers working primarily with sexual abuse cases and rapes and was therefore able to examine whether dealing with sexual abuse trauma contributes to higher STS symptoms compared to working with other trauma.

4.6 Caseload or Workload

In addition to research indicating that a greater caseload of sexual abuse trauma clients is associated with increased symptoms of STS (e.g., Schauben & Frazier, 1995), it has been suggested that counsellors who work primarily with trauma survivors compared to those with a mixture of clients experience more symptoms of STS (Trippany et al., 2004). Trippany et al. (2004) advising that caseloads need to be monitored and suggest a "moderate" number of trauma clients, though it is unclear what would be considered moderate. Arvay and Uhlemann (1996) also found that counsellors who experienced high levels of stress perceived that they saw too many traumatised clients and that their caseload was very intense. Similarly, whilst finding no relationship between STS symptoms and caseload size, Meyers (1996) did discover that the duration and intensity of work impacted upon the experience of STS symptoms. In her study of 205 child protection workers she found a significant relationship between number of hours worked

per week and symptoms, with a greater number of hours resulting in more STS symptoms.

In contrast to this position, Nelson-Gardell and Harris's (2003) study of 166 child welfare workers found that the amount of exposure to trauma clients and caseload were not related to child welfare workers' risk of STS. Similarly, Van Minnen and Keijsers (2000) using a control group design, found that therapists with trauma clients were no more likely to report symptoms of STS or VT than therapists with non trauma clients. Van Minnen and Keijsers' study obtained participants (20 trauma therapists and 19 non-trauma therapists) by approaching randomly selected institutions and mental health organisations, giving minimal information about the objective of the study. Despite their observations that trauma therapists reported (during qualitative interviews) more changes in the way they thought about the world, other people and safety, the questionnaire data found no actual differences in cognitions between the trauma and non trauma therapists. Van Minnen and Keijsers suggested that rather than being pathological, changes in cognitions could simply be an adaptive and natural process of overcoming and assimilating clients' distressing stories. Their findings also seem to suggest that STS and VT measures could be tapping into another construct as opposed to resulting from secondary trauma occurring due to work with a trauma caseload.

In Baird and Kracen's (2006) synthesis of STS research, they found persuasive evidence for "amount of exposure to clients" (including hours with trauma clients, percentage of caseload being trauma clients and cumulative exposure) increasing likelihood of STS but also some evidence against the contribution of amount of exposure to clients. Nevertheless, if caseload was implicated in the development of trauma

symptoms, this may be difficult to manage in the police force. In terms of police investigations, specialist areas such as sexual abuse units and homicide units would be unable to vary their caseloads with different "clients", though they could ensure that the workload is shared around equally or that strict time in position provisions are adhered to, for example, perhaps imposing time limits on time served at Sexual Offence and Child Abuse Units (SOCAU) or Homicide such as 2-3 years. The current study examined the impact of caseload (type of work) and workload (in terms of hours worked) upon secondary trauma symptoms.

4.7 Gender

Kassam-Adams (1999) reported that gender significantly impacted upon PTSD symptoms experienced by therapists vicariously exposed to sexual trauma via their clients. She found that females reported more PTSD symptoms than males. Perhaps female therapists might find it easier to identify with or place themselves in the victim's shoes by virtue of their gender. Likewise, female child protection workers (in comparison to their male colleagues) reported more STS symptoms in addition to a greater number of other psychological distress indicators such as somatic symptoms (Meyers, 1996; Meyers & Cornille, 2002). Similar findings exist for police officers. Hodgins et al. (2001) found that being female was associated with a higher risk of developing PTSD in a longitudinal study of Victorian police officers. Martin et al. (1986) also discovered that generally, female officers were more likely to report a number of stresses arising from their work and a readiness to seek help to cope with them, whereas males were more likely to report no stress (Martin et al., 1986). On the

other hand, Adams et al. (2001) found gender had no significant effects upon the experience of VT symptomatology. It is possible though that any impact of gender upon STS symptoms may merely be a reflection of the general stress literature. Generally the literature indicates that women consistently report more psychological distress than men (e.g., Griffiths, 2003). However such a tendency does not indicate whether women actually feel more distress or whether they are more likely to report it. One other area where female officers differed from their male counterparts concerns empathy. Female police officers were a lot more likely to describe their responses to rape victims as empathic compared to male officers, which may support Figley's (1995a, 1995b, 1999a, 1999b) theory that empathy is a crucial component in the development of STS.

4.8 Stress and Coping

The research suggests that coping responses to stress have also been implicated in the development or maintenance of VT or STS (Arvay, 2001; Lerias & Byrne, 2003), particularly for emergency service workers and police (Follette et al., 1994; Marmar et al., 1996). Coping responses include the way in which a person uses their intellectual and behavioural resources to respond to a stressful situation (Lerias & Byrne, 2003) and it is now recognised that the human coping response to stress is a complex multidimensional dynamic process involving context, environment, personality dispositions and appraisals (Folkman & Moskowitz, 2004). Stress and the way humans adapt to stress have long been thought of as contributors to physical ailments and psychological distress in general (Hayward, 2005) and consequently have a substantial research history with different paradigms being prominent at different times.

Stress as a concept has been somewhat elusive in the psychological literature, with no single agreed upon definition (Pines & Keinan, 2005). Though, a meaningful framework often used in police work (e.g., Hart, Wearing & Headey, 1993) is Lazarus's transactional model of stress (Lazarus, 1993, 2000), which assumes that stress is a dynamic process occurring between a person and their environment. Essentially the stress a person feels is dependent on their appraisal of the situation and the resources or coping abilities they believe they have to effectively deal with the event. Thus, stress and coping are inextricably linked in the literature as researchers strive to understand and explain human behaviour.

One widely accepted measure of reaction to stress is the COPE scale (Carver, Scheier &Weintraub, 1989). This scale contains thirteen conceptually distinct scales, each with 4 items. These scales are: Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Seeking out of Instrumental and Emotional Social Support, Focusing on and Venting of Emotions, Behavioural and Mental Disengagement, Positive Reinterpretation and Growth, Denial, Acceptance and Turning to Religion (Carver et al., 1989). Two other scales Alcohol/ Drug use and Humour have since been added.

Whilst the COPE was designed to be used dispositionally and situationally depending on how questions are framed, Carver et al. (1989) found that the COPE scale had greater internal consistency when rating specific behavioural events rather than general tendencies. However, care needs to be taken even when questioning persons about specific stressful events, with research showing that the longer the interval between the event and the assessment, the more likely it is that responses will reflect memory

biases, and potentially represent dispositions as opposed to situational responses (McCrae & Costa, 1986).

4.8.1 Coping Responses and STS. Whilst some coping strategies seem to be consistently associated with poorer outcomes, it is difficult to compare studies as they often use different measures of coping and place emphasis on different facets of coping. Nevertheless, coping responses do seem to be associated with the development, severity or maintenance of VT or STS (Arvay, 2001; Hallet, 1996; Lerias & Byrne, 2003) with negative coping strategies such as increased caffeine consumption and alcohol abuse aimed at emotionally managing the stress, being associated with more STS symptoms (Lerias & Byrne, 2003). Hallet (1996) used the COPE in her study of trauma and coping in 126 homicide and child sexual abuse detectives and found that maladaptive coping strategies were significantly associated with pathology and distress. In particular the sub-scales of Behavioural Disengagement and Venting of Emotions were associated with higher Depression, Distress and PTSD scores.

Most studies linking coping strategies to trauma have involved measures of PTSD symptoms. For example, one study of 181 rescue workers who were involved in the aftermath of the Oklahoma City bombing found that drinking alcohol was the second most frequent coping method, and it was associated with poorer functioning and greater PTSD symptoms (North et al., 2002). Similarly, negative coping strategies were examined by Marmar et al. (1996) who studied a total of 358 emergency services personnel (including police, fire-fighters, paramedics, medical technicians and transportation workers). They found that rescue workers who coped by means of emotional suppression and wishful thinking (and believed that fate was pre-determined

by factors beyond their control) were at a higher risk of experiencing and maintaining symptoms of post-traumatic stress. This was also the case for fire-fighters in Northern Ireland. Those who believed they had little control of events and used avoidance as a coping method were most likely to experience psychological distress (Brown, Mulhern & Joseph, 2002). In one interesting connection, Follette et al. (1994) found that it was police professionals with a history of childhood trauma compared to those without such a history who tended to use more negative coping such as using drugs or alcohol, withdrawing from others or attempting to forget difficult material. Another negative coping strategy includes dissociation, which if used as a long term method of coping can disconnect the persons' experience from their feelings and contribute to increased PTSD symptomatology in police officers (Marmar et al., 1996).

Alternatively, some coping styles or strategies have been implicated in reducing the risk of PTSD or STS symptoms. For instance, Schauben and Frazier (1995) examined secondary trauma effects on 148 psychologists and sexual abuse counsellors and found that the five most common coping strategies (Active Coping, Emotional Support, Planning, Instrumental Support and Humour) were associated with fewer PTSD symptoms and fewer secondary trauma reactions. They also discovered that the least commonly reported coping method, Behavioural Disengagement, was associated with higher levels of secondary trauma symptoms and burnout. Interestingly, coping method also seems to be related to age. Marmar et al. (1996) found that older emergency services personnel used less avoidant coping strategies, which they attributed to a better emotional preparedness for 'disturbing' duties or reflecting greater training.

There appears to be no studies which have examined the relationship between coping strategies and the STSS. In addition, few studies examining trauma have used the COPE scale when examining PTSD symptoms. Given the complex nature of coping, the current study used a modified version of the COPE (see Chapter 7) to examine a broad range of coping strategies. This study also used a specific situational cue rather than a dispositional approach to eliciting participants' coping responses to a specific event in order to increase internal consistency. It was expected that participants who use negative coping responses such as Alcohol and Drug use, Focusing on and Venting of Emotions, and Behavioural and Mental Disengagement would exhibit higher STS and PTSD symptomatology. Alternatively those who use coping strategies such as Planning, Active Coping and Social Support might be expected to have fewer symptoms of STS or PTSD.

After decades of research, it is now recognised that coping, like most human psychological constructs is a complex multidimensional dynamic process involving context, environment, personality dispositions and appraisals (Folkman & Moskowitz, 2004). Thus the current generation of coping research incorporates elements of situational and dispositional influences on coping behaviours, with the recognition that persons can demonstrate some flexibility and some consistency in their coping strategies (Bolger, 1990; Carver et al., 1989; Watson & Hubbard, 1996) and some appreciation that strategies may not be adaptive or maladaptive of themselves. Thus much current research into coping strategies combines personality measurements with coping instruments.

4.8.2 Personality and Coping. Personality has been defined as a constellation of attributes, traits or dispositions that describe, explain or predict an individual's behaviour (Schnurr & Veilhauer, 1999). In spite of the historical decline in interest in personality or

dispositional concepts in psychological coping research, Watson and Hubbard (1996) assert that "personality traits are crucially important in determining how individuals adapt to the ongoing stresses and strains of their lives" (p.737). They argue that an emphasis on rational models characterised by the process orientated paradigm of the 1970's and 1980's was just as flawed as the original focus on dispositional defenses by the psychodynamic approach. Whilst some research into coping has focused on specific personality traits such as Optimism, Hardiness or Locus of Control (Carver et al., 1989), Watson and Hubbard stress that such studies omit the entire range of personality characteristics typically found in taxonomic measures of personality such as the Big Five.

Watson and Hubbard (1996) studied personality measures using the NEO Five-Factor Inventory (NEO-FFI: Costa & McCrae, 1992) and the coping responses using the 53 item version of the COPE (Carver et al., 1989) of 375 psychology undergraduates and found that the Big Five jointly accounted for 20% of the variance in the COPE scale scores, with 9 out of the 14 multiple correlations being .40 or higher. Neuroticism had strong links to COPE scores, with Neuroticism being associated with passive and ineffective forms of coping such as giving up attempts to reach goals (Behavioural Disengagement), daydreaming (Mental Disengagement), expressing negative feelings to others (Venting of Emotions) and pretending their problems weren't real (Denial). Those high in Neuroticism were also less likely to accept the reality of what had happened (Acceptance) or learn from their experience (Positive Growth). Their results were consistent with those of Carver et al. (1989), who found that Neuroticism was positively correlated with Behavioural Disengagement, Mental Disengagement, Denial and Venting of Emotions and was negatively correlated with Active Coping and Positive

Reinterpretation. In fact there is so much research linking Neuroticism with ineffective and passive coping (e.g., Bolger, 1990; Carver et al., 1989; Endler & Parker, 1990; Watson & Hubbard, 1996), that Costa and McCrae (1991) argue that any study looking at situational determinants of stress and coping should also take Neuroticism into account.

In Watson and Hubbard's (1996) study the other personality trait that was strongly linked to coping responses was Conscientiousness. Persons scoring highly on Conscientiousness were likely to engage in active problem focused response strategies such as Planning, Active Coping and Suppression of Competing Activities yet less likely to use Alcohol or Drugs or engage in Behavioural Disengagement indicating that they are persistent and do not easily give up their goals. Their results seem to suggest that personality is highly relevant to one's choice of coping strategy.

4.9 Personality and PTSD

Certain personality factors have also been associated with increased risk of and severity of PTSD symptoms. McFarlane (1989) studied fire-fighters involved in the 1983 Australian Ash Wednesday fires and found that Neuroticism (as measured by the Eysenck Personality Inventory; Eysenck & Eysenck, 1975) together with previous treatment for a psychological disorder were better predictors of PTSD than the degree of exposure to the disaster itself. Likewise, in a longitudinal study of police officers in the Victoria Police, Hodgins et al. (2001) found that personality traits (as measured by the NEO Five-Factor Inventory; Costa & McCrae, 1992) were implicated as predictors of PTSD, with Neuroticism being associated with increases in the likelihood of later PTSD and lower levels of Agreeableness and Conscientiousness being important predictors of

Current Distress symptoms (measured by the General Health Questionnaire; Goldberg, 1972). Similarly, in their study of emergency services personnel attending a bridge collapse, Marmar et al. (1996) found that fire-fighters with lower adjustment scores on the Hogan Personality scale (similar to Neuroticism but with higher scores indicating stability and calmness) were more likely to be at risk of developing PTSD. In their review of empirical studies into personality and PTSD, Schnurr and Vielhauer (1999) concluded that the overwhelming majority of the research pointed to Neuroticism being associated with greater levels of PTSD and greater chronicity.

However, to date there does not appear to have been any investigation into the impact of personality variables on the experience of or severity of STS. Therefore the current study examined whether personality factors are associated with STS symptoms in any way. Given the existing research implicating a strong link between Neuroticism and risk of developing PTSD, it was expected that higher Neuroticism scores would be associated with greater STS symptomatology. Neuroticism is also related to levels of Social Support (Kendler & Prescott, 2006), with highly emotional people tending to report more frequent stress and also more difficult and conflict ridden relationships. Thus to some extent Neuroticism may exert a downward pressure on social support. This is unfortunate as social support is often a protective factor against several indices of distress (Kendler & Prescott, 2006).

4.10 Social Support

Social support has been identified as a major factor in mediating the effects of burnout and job stress (Adams et al., 2001; Koeske & Kelly, 1995; Maslach, 1982;

Sargent & Terry, 2000) and it seems to have a similar relationship to secondary trauma. In a study of lay trauma counsellors, Ortlepp and Friedman (2002) found an inverse relationship between social support and STS symptoms. That is, those counsellors who received social support from both work colleagues and family reported fewer STS symptoms. Likewise, Adams et al. (2001) found that Perceived Social Support was associated negatively with symptoms of VT. These researchers also found that lower Social Support correlated with higher burnout scores on all three dimensions of the Maslach Burnout Inventory. That is those who perceived they had few social supports were more likely to feel they had personally accomplished less, were more likely to depersonalise clients and to suffer from a greater degree of Emotional Exhaustion. In a review of the literature, Lerias and Byrne (2003) found that Social Support was associated with reduced PTSD symptoms in those exposed to trauma either directly or vicariously. Those with less Social Support tended to experience more severe distress and PTSD symptoms. However, not all studies have found social support to impact on symptoms. Hyman (2004) found that Perceived Social Support was unrelated to secondary traumatic stress symptoms in his study of 165 Israeli police forensic technicians.

4.11 Job Characteristic Variables: Job Satisfaction and Job Turnover

Another factor that may potentially lessen STS symptomatology could be job satisfaction. Figley (1995a) includes "sense of achievement" in his model of STS development for those who help the traumatised, suggesting that a higher sense of achievement associated with work can ameliorate STS symptoms. He defines sense of achievement as the extent to which the helper is satisfied with their efforts to assist the

traumatised. Therefore, counsellors might be likely to report less STS when they derive satisfaction from their empathic responses and perceive success in their endeavours (e.g., relieving the suffering of a victim; Figley, 1995a). Stamm (2002) expands upon this thinking, explaining why a "compassion satisfaction" subscale (Figley, 1999b) was added to the Compassion Fatigue Self-Test (See Figley, 1995). Stamm (2002) proposes that a person's resiliency is enhanced when they derive positive benefits from their work, so that even in extreme conditions, if a helper feels they are actually making a difference to people then such a perception is beneficial to well-being. Therefore "sense of achievement" (Figley, 1995a) and "compassion satisfaction" (Figley, 1999b; Stamm, 2002) appear to represent the same construct and seem to resemble the well researched phenomenon of job satisfaction.

Job satisfaction has received a lot of attention as a construct of interest in recent years, by psychologists and business researchers alike (Cranny, Smith & Stone, 1992), with high job satisfaction often being associated with lessening the impact of burnout (Pines & Keinan, 2005), reducing job turnover (e.g., Cotton & Tuttle, 1986) and reducing overall psychological strain levels (George & Jones, 1996). Job satisfaction relates to "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976, p. 1300). Cranny et al. (1992) posit that the appraisal usually involves the incumbent comparing actual outcomes to those which are desired, be they perceived as expected, deserved or fair. Job satisfaction has historically been linked with job turnover in the literature, with low levels of job satisfaction often associated with turnover intentions (Cranny et al., 1992; George & Jones, 1996)

Job turnover occurs when employees exit an organisation (voluntary or involuntarily; Brough & Frame, 2004). While job turnover is to some degree unavoidable, it is the voluntary turnover that organisations strive to predict, as a large turnover can reduce the efficacy of their workforce (Smith & Brough, 2003) and impact on a business' bottom line. It is for this reason that organisations initially embraced the concept of job satisfaction, hoping for a direct relationship to their short-term goals of cost reduction, reduced turnover and increased individual productivity (Smith, 1992). However, the association of job satisfaction and job turnover intentions is often influenced by a multitude of factors including individual traits such as gender or personality (Cotton & Tuttle, 1986; Smith, 1992; Thoresen, Kaplan, Barsky, Warren & de Chermont, 2003) as well as organisational factors such as supervisor support or gender discrimination (George & Jones, 1986; Brough & Frame, 2004).

There is considerable research examining job satisfaction, job turnover and burnout (e.g., Houkes, Janssen, de Jonge & Bakker, 2003; Jayaratne & Chess, 1984; Pines & Keinan, 2005; Thoresen, et al., 2003; Wright & Cropanzano, 1998). In particular, research suggests that emotional exhaustion, the key component of burnout, is associated with turnover intent (Houkes, Janssen, de Jonge & Nijhuis, 2001). Pines and Keinan (2005) suggest that burnout occurs in professionals when there is a lack of a sense of significance at work and when the goals and expectations that people had upon entering their professions are unable to be fulfilled. Thus a counsellor whose goal was "to help others" might experience burnout when they find they cannot help their clients. Therefore, the state of burnout as described by Pines and Keinan, appears to be the

antithesis of job satisfaction, which would occur if one thought one's contribution, was meaningful.

However, while there is a lot of research concerning burnout, job satisfaction and turnover, there appears to be little research concerning job satisfaction and PTSD. A search using EBSCOhost and selecting PsycARTICLES, Psychology and Behavioural Sciences Collection and PsycINFO searching for "Job Satisfaction" and posttraumatic stress (in journal abstracts) revealed only six articles for consideration, three of which were dissertations, one in a Polish journal and one not relevant. This left one article (North et al., 2002) which examined coping, functioning and adjustment of 181 firefighters after the Oklahoma City bombing. They found that overall the fire fighters had low rates of PTSD and generally high job satisfaction. In addition they found that PTSD was associated with low levels of Job Satisfaction. Therefore it is possible that Job Satisfaction might be related to STSD given the assumed theoretical parallels between the constructs of PTSD and STSD (eg., Figley, 1995a, 1995b). A similar search (using EBSCOhost and same data bases as above) for job satisfaction and secondary traumatic stress (appearing in any part of a publication) also revealed six articles. Of those six, five were dissertations, only one article was published in a journal. The published study (Wee & Myers, 2003) involved 71 participants who were attending a workshop on the prevention of compassion fatigue by providers of Critical Incident Stress Management (CISM) services. Whilst 40% of participants were found to have moderate to extremely high risk of compassion fatigue (or STS), 89% of these participants also reported good to extremely high compassion satisfaction with 87% considered to be at extremely low risk for burnout. The authors interpreted these results as evidence that the rewards of

providing CISM mitigated the negative effects of the work. The current study therefore also explored the impact of job satisfaction and job turnover intentions upon secondary trauma.

Chapter 5 Police

5.1 Police Stress

Police work has often been reported as one of the most stressful occupations a person can undertake (Anshel, Robertson & Caputi, 1997; Selye, 1978; Smith & King, 2004; Violanti, Vena & Marshall, 1986) with a variety of causes of police stress being identified. Such causes can range from rare traumatic events to operational and management issues and can include death of a partner or having to take someone's life, being threatened with violence or a weapon, child abuse investigations, peer support and supervisor issues, police bureaucracy and organisational factors, and work family relationships (particularly how these are affected by work or vice versa). It has been suggested that the consequences of such stress and trauma in police work may result in an increased risk (compared to other occupational groups) of outcomes such as substance abuse, marital problems, suicide and increased mortality rates from a variety of illnesses and physical problems (Anshel et al., 1997; Hallet, 1996; Harpold & Feemster, 2002; Violanti, 2004; Violanti et al., 1986).

In particular, alcohol abuse and dependency has been reported to be prevalent in up to 25% of police officers (Violanti, 1983) and it is believed that problems occur when alcohol is used as a method of dealing with stress after other coping attempts have failed (Violanti, Marshall & Howe, 1985). Violanti et al. (1985) conducted a study of 500 police officers in the U.S.A. and found that stress at work was directly related to increased use of alcohol as a coping strategy. They also found that cynicism, described as "mocking disbelief of the police system" (p. 107) was a strategy aimed at lessening the effect of job demands. They argued that this strategy did not work and actually increased

stress which in turn increased alcohol use. Violanti et al. (1985) speculated that alcohol use reduces emotional dissonance experienced by officers who perceive the need to remain emotionally detached and objective in their work in order to achieve their goals.

Similarly, marital and relationship problems are said to arise due to the stressful nature of police work, whether that is operational or organisational demands (Roberts & Levenson, 2001). Roberts and Levenson conducted a study of 14 police couples (all the officers being male) using daily diaries and found that work stress impacted on marital relations by increasing the physiological arousal of the male, which resulted in less positive and more negative emotion, an effect which seemed contagious to their spouses. Such effects may explain marital difficulties in the police population, since research findings suggest that a preponderance of negative compared to positive emotions and heightened physiological arousal can have a negative impact upon marriage and can often be indicators of future separation if frequent or sustained (Gottman, 1999; Gottman & Silver, 1999; Roberts & Levenson, 2001).

However, not all police officers experience substance abuse and marital problems, thus individual vulnerabilities or susceptibilities may account for these difficulties in some officers. For instance, it is not clear to what extent personality type may have impacted upon the felt stress levels in Roberts and Levenson's (2001) study of police marriages, whether that is the personality of the police officer or partner. Other studies have illustrated the necessity of accounting for personality. For instance, when personality was accounted for, Hart (1999) found that the non-work domain (including relationships with others and what happens outside of work) had more contribution to the overall well being of police officers than the work domain. This would seem to suggest

that personality may be an important factor, impacting upon both felt distress and levels of well-being. Roberts and Levenson also do not seem to consider the converse position that relationship stress might also impact upon felt work stress.

Nevertheless, some longitudinal research has also found increased suicide rates (almost three times the rate) amongst police compared to other municipal workers (Violanti et al., 1986) and also increased risk of mortality from certain diseases such as cancer of the esophageus and colon and increased risk of heart disease. Violanti et al. (1986) speculated that these results may partly be attributable to increased stress, especially for the cancers involving the digestive tract, given that in stressful situations peristalsis (the movement of the intestines to digest food) is decreased. In addition, ongoing stress can also lower the body's immunity to viruses and cancer promoting substances. It is also speculated that the lifestyle of police may also contribute to such diseases due to shift work, irregular and unhealthy diet (i.e., too much high fat, high meat consumption and lack of vegetables), smoking, alcohol use, coffee drinking and lack of exercise. Whatever the causes, risk of mortality from these illnesses increased the longer the individuals worked as police officers (Violanti et al, 1986).

Police officers have been found to be up to six times more likely than other community samples are to suffer from stress reactions to traumatic events (Green, 2004). Whilst PTSD can occur as a result of one traumatic experience, there is accumulating evidence suggesting that cumulative trauma as opposed to a single incident can increase the severity and duration of stress reactions (e.g., Moran & Britton, 1994; Violanti, 1996; Williams, 1993). Williams suggests that the reason for the increase in stress reactions may be the result of unresolved trauma causing individuals to then leap to more

pathological reactions to new traumatic events. Certainly Moran and Britton (1994) found that for volunteer state emergency service workers, the more incidents attended and the more years worked were predictive of the severity of a stress reaction. Perhaps number of incidents may be a better indicator of experience than years in an emergency service profession. The effects of accumulating trauma events and severe stress reactions to trauma upon police can include increased sick leave and early retirement from the force (Stephens & Miller, 1998).

In one New Zealand study, psychological factors (69.2%) were cited as the main reason for leaving the police force with 43% of officers stating that trauma was a factor in their decisions to leave (Miller, 1996 cited in Stephens & Miller, 1998), though, it is unclear to what extent any possible secondary gains may have impacted upon such reasons (e.g., pending compensation claims). In addition, Hart and Cotton (2003) have speculated that PTSD could be to some extent, iatrogenically induced by therapists who may inadvertently ignore a major trigger for a stress claim (e.g., dissatisfaction with a management decision) and presume that operational stressors exert a stronger influence upon individuals' well being than organisational matters.

However, whilst trauma and PTSD can be devastating for individuals who are affected by them, it is important to remember that most individuals do recover from trauma and do not develop PTSD (Breslau, 2002; McNally, 2003; Stephens & Miller, 1998) and this may well be the case with STS. This is certainly the case for police officers exposed to trauma (Curran, 2003; Liberman et al., 2002). In fact some research questions the assumptions that policing is highly stressful, finding that police officers actually reported having a more favourable quality of life when compared to population

norms (Hart, Wearing & Headey, 1993). Further, it has been suggested that police officers report that organisational stressors (including supervisor issues, conflict and recognition processes) cause more distress to them than their operational duties (e.g., being exposed to danger or dealing with victims; Brown & Campbell, 1990; Hart, Wearing & Headey, 1994; Liberman et al., 2002).

This discrepancy in the research is attributed to the often limited way in which work stress is studied (e.g., "stressors and strain" approach), which frequently overlooks the independent contributions that positive and negative events often make to distress and overall levels of well-being (Hart & Cotton, 2003). Hart and Cotton (2003) speculate that the conventional view of police work being especially stressful is in part erroneously derived from stereotypical portrayals of police in the media and also by groups (e.g., police unions) who have a vested interest in policing being seen as distinctively stressful. Hart et al.'s (1994) study consisted of examining the effects of personality and work-related experiences on 404 Victoria Police Officers and found that Neuroticism and organisational hassles and uplifts were related to perceived quality of life (PQOL). On the other hand, operational duties were not related to PQOL once Neuroticism was taken into account. However, Hart et al. (1994) did not include any measures of social desirability and an alternative explanation could be that officers might be more comfortable in reporting stress in relation to organisational or bureaucratic stressors rather than admitting that dealing with victims or other operational duties caused them distress. Certainly some research suggests that police cultural issues deter admission of distress in the face of unpleasant tasks or danger and instead promote a macho image (e.g., Pogrebin & Poole, 1991). Such a culture however, may not preclude admissions of

being frustrated by the system or other such bureaucratic concerns and in fact may encourage such views.

5.2 Police Culture

Police culture has often been referred to as "macho" or masculine, with self-imposed and community expectations governing the emotional displays and behaviours of officers (Pogrebin & Poole, 1991; Reiser & Geiger, 1984; Waddington, 1999). Even amongst cultures and countries as disparate as South Africa, Japan and England, certain police sub-cultural attitudes have proven to be extraordinarily similar, such as a sense of mission, desire for excitement and action, authoritarian conservatism, suspicion and cynicism, especially towards the law and legal procedures (Waddington, 1999). Often police have an "us versus them" division of their social world whether this is with the public as "them" or even police management as "them".

Emotional displays concerning investigations or traumatic encounters seem to be strictly taboo (Violanti, 1983), with officers needing to believe in their own invulnerability and ability to handle anything (Reiser & Geiger, 1984). Reiser (1973) used the phrase "John Wayne Syndrome" to describe the macho attitudes, feelings of invulnerability and avoidance of feelings in police officers. Reiser and Geiger (1984) argue that this syndrome may account for increased cynicism amongst officers and emotional distancing from what could be helpful social supports (Reiser & Geiger, 1984). This is illustrated in a qualitative study of 239 police officers in the United States, which found that expression of personal feelings was severely limited with professional norms dictating that officers remain calm and in control (Pogrebin & Poole, 1991). The police

believed that the general public expect them to be fearless and in control and that emotional displays could compromise their authority and effectiveness when handling tragic or traumatic events. In addition they also found that officers were unlikely to reveal their feelings to their fellow police officers, fearing being viewed as incompetent or weak. 'Weakness' seems to be viewed as an unforgivable sin, with police officers indicating that they do not want to be partnered with other officers who are perceived as emotional and unable to act decisively, thus expression of emotion concerning work incidents can have a deleterious effect on interpersonal relationships and promotional prospects (Pogrebin & Poole, 1991).

Pogrebin and Poole (1991) also point out that if an identity such as police officer is important to a person, they are likely to act in ways that express that identity, such as controlling emotions and making appropriate responses accepted by group standards. Such acceptable responses may include expressing cynicism about legal matters, and expressing frustration about management or interpersonal issues at work, none of which would compromise or threaten identity in a way that admitting stress or distress about investigations or traumatic events might do. Nevertheless such emotional constraints might break down in the face of severe traumatic events or even in response to cumulative traumas which may account to some degree for research (e.g., Green, 2004), which indicates that the police population may have an increased risk of PTSD compared to the general population.

5.3 Police and STS

Work related PTSD and burnout in police officers has been said to parallel STS research in mental health professionals (Follette et al., 1994), though relatively little research has focused specifically on the concept of secondary traumatic stress reactions in a police population. No studies of police to date have used the Secondary Traumatic Stress Scale (STSS) which was specifically designed to measure secondary traumatic stress, despite the contention that police would be a population affected by secondary trauma (Figley, 1995a; 1999b). Nevertheless, Follette et al. (1994) in their investigation of secondary traumatic stress on 558 mental health and law enforcement professionals did find that personal stress, personal trauma history and negative responses to investigating sexual abuse cases were predictive of increased PTSD symptoms in the 87 police officers who were part of that study. Similarly Martin et al. (1986) found that symptoms of PTSD were more prevalent in officers dealing with chronic stressors such as child abuse cases, spouse abuse or dealing with rape victims rather than other operational events.

There appear to be no studies that examine the prevalence of STS in a police population. There are however inherent difficulties in attempting to gauge the amount of STS in the police population, particularly in being able to separate primary trauma from secondary. For example, taking a rape statement may more easily be classified as secondary trauma, in so far as the police officer did not actually witness the event directly but rather in an indirect way through the victims' retelling of the incident. However, it is not as clear with other events such as homicides or traffic accidents. Whilst officers are unlikely to have actually witnessed the event, they may be confronted with graphic scenes of mutilation or at least be confronted with the physical reality of violence

perpetrated on another human being when they attend the accident or murder scene. Such an incident could be thought of as a primary as well as secondary traumatic event.

Accordingly, the current study asked participants to nominate particular crimes or investigations that they have found to be stressful, that have involved victims and that they attended after the event. This was designed to ensure that the event is one to which the concept of secondary trauma rather than primary trauma would apply. Nevertheless, in this population, it is difficult to distinguish the separate effects, particularly cumulative ones relating to direct or secondary exposure to traumatic incidents. The present sample was also comprised of members of sexual abuse and child abuse units, whose primary investigations concern rapes, sexual abuse and child abuse and predominantly deal with victims after the event.

5.4 Sexual Abuse and Child Abuse Units (SOCAU)

One group in the Victoria Police Force that tends to be more secondarily exposed to traumatic events is SOCAU. They generally become involved in investigations involving victims of rape and child abuse after the event and hear about the event through the victim re-telling their story. Given that reported vulnerabilities to increased symptoms of STS include dealing with sexual assault victims (Cunningham, 2003; Martin et al., 1986; Schauben & Frazier, 1995) and in particular child abuse victims (Beaton & Murphy, 1995; Brady et al., 1999; Martin et al., 1986), this is a population that seems to be exposed to more of the theorised risk factors for the development of STS. In addition, the majority (75.4%) of police officers in SOCAU are female whereas females only comprise 25.5% of general duties police, 22% of sexual crime squad detectives,

9.1% of homicide detectives and 41.4 % of crime scene officers (Foster, S., personal communication 2nd July, 2008). Since being female has also been implicated as a risk factor in the development of STS in some research (e.g., Meyers, 1996), this might be another factor that could result in higher levels of STS in SOCAU compared to other police work locations.

Nevertheless, there only appears to be two studies examining the potential effects of secondary trauma on police and forensic interviewers who investigate sexual abuse and abuse of children. Hallet's (1996) study, including sexual abuse detectives, found that PTSD symptomatology was higher in homicide and sexual abuse detectives compared to other detectives. A further study (Perron & Hiltz, 2006) on a similar population (66 forensic interviewers associated with advocacy centres in the United States) found that the number of forensic interviews conducted with children and experience (length of time employed as a forensic interviewer) did not have a strong relationship with secondary trauma. Peron and Hiltz also found a significantly high correlation (r = .63) between secondary trauma (using the STSS) and burnout (using the Oldenburg Burnout Inventory; Demerouti et al., 2003) and found that higher scores on job satisfaction were associated with lower scores on both burnout and secondary trauma.

There has also been a study of secondary traumatic stress in child protective service workers, a population that is also continually exposed to child abuse. Meyers' (1996) study found that secondary traumatic stress did exist in this population and that increased symptoms were related to several factors. Workers who worked longer hours with longer exposure to victims' traumatic material and those with more years of experience were actually more likely to evidence increased symptoms of STS.

Despite limited specific studies of STS and police dealing with sexual assaults, there is case law (State of New South Wales v Seedsman, 2000) which has addressed the issue in a compensation case in New South Wales (NSW). On 12th May, 2000, the NSW Court of Appeal upheld a previous judgement, in which Ms Beth Louise Seedsman (a former police officer) was found to have suffered from PTSD as a result of her exposure, to crimes committed against children during the course of her employment. It was further found that the NSW Police Service had failed to provide her with a safe system of work in so far as she was not appropriately protected from the mental injury which can result from exposure to the human tragedies she had to deal with. Ms. Seedsman had worked in a Child Mistreatment Unit (similar to Victoria Police's SOCAU units) in Bankstown for five years, and part of her duties included interviewing victims of child abuse, sexual and other physical assaults. The judgement held that on the balance of probabilities, Ms Seedsman sustained PTSD as a result of her traumatic exposure directly (by attendance at crime scenes, hospitals and autopsies) or "vicariously through interviewing the victims of abuse and their families" (p. 8). This judgement seems to highlight the blurring of PTSD and STS within a police population and the difficulty of disentangling the two concepts.

The judgement also noted that despite an absence of research showing a link between police investigations of child abuse and psychiatric illness, that evidence from similar populations could be considered. That is, the judgement found there was ample evidence of occupational stress arising from occupations where workers were engaged in "counselling situations" (page 13). It was considered that the police role was a combination of criminal investigation and a victim support role, much like a counselling

role. Therefore it is clear that research is required in order to examine the role of secondary trauma upon a police population, specifically one considered to be particularly at risk such as SOCAU members.

Chapter 6 The Present Study

6.1 Research Aims

The major aim of this study was to thoroughly explore and examine the concept of secondary trauma in order to understand the concept itself, its antecedents and possible contributing factors to its occurrence. It was considered that a police population, particularly those officers exposed to second hand narratives of child abuse, sexual abuse and rape trauma, would be a good population in which to carry out this research. Police officers in general are regularly exposed to other people's trauma. The specific aims of the study are detailed below.

One aim of this study was to discover whether secondary trauma can be determined in Victoria Police members and particularly in police officers working in SOCAU units. Secondly, if STS was found in Victoria Police members, then what was the prevalence? The study also examined different theoretical vulnerabilities considered to contribute to the development of STS, to see if and to what extent they were associated with increased STS symptoms in a police population. In particular, given the literature suggesting that persons with Prior Trauma may be drawn to work in areas involving high levels of trauma (Patton et al., 1999; Stephens & Long, 2001) and that Childhood Trauma in particular is associated with the development of PTSD or STSD (e.g., Cozolino, 2005; Davidson et al., 1991; Folette et al., 1994; Hallet, 1996) the present study aimed to investigate if levels of Childhood Trauma were higher in a police population compared to other populations. As there seems to be some overlap between concepts of STS and burnout in the literature, the current study also examined if the measure of STS was sufficiently distinct from the measure of burnout. In addition, the current project aimed

to give a voice to participants and invited them to report, without prejudice, the main concerns affecting them in the workplace, whether this is offset by positive aspects, and the reasoning behind choosing a particular work area.

6.2 Research Questions and Hypotheses

Research Question 1: Operationalising STS as STSS scores, how do police score in comparison to other populations?

Research Question 2: Are the proposed vulnerabilities to STS actually associated with it and do they predict STS in a police population?

Research Question 3: Do police have more prior trauma, especially, childhood trauma, than other community groups?

Hypothesis 1: It was predicted that SOCAU police officers would evidence more STS than other police officers.

Research Question 4: Given the conceptual overlap in the literature, is there sufficient distinction between measures of STS, PTSD and burnout? In particular, given the research suggesting strong overlap with the Emotional Exhaustion component of burnout and STS (e.g., Deighton et al., 2007; Perron & Hiltz, 2006), is STS sufficiently distinct from the current study's measure of Emotional Exhaustion?

Research Question 5: What do police identify as the worst and best aspects of their jobs and why do they choose to work in particular locations?

Chapter 7 Method

7.1 Participants

The sample consisted of 210 participants (135 males and 75 females) with ages ranging from 20 to 55 years (males $M = 41.5$ years, $SD = 6.9$; females, $M = 36.8$, $SD = 7.04$). Participants were all members of the Victoria Police Force who were serving in several operational areas, a) general duties police ($n = 49$), b) sexual offences and child abuse unit (SOCAU; $n = 68$), c) crime squads ($n = 22$), and "others" ($n = 71$). The crime squads were comprised of detectives from the homicide squad ($n = 16$) and sexual crime squad ($n = 6$). The "others" category was comprised of a diverse range of officers, including members from crime scene ($n = 42$), traffic management units ($n = 10$), divisional crime investigation units ($n = 7$), training ($n = 3$), communications ($n = 2$), intelligence ($n = 2$), youth resource officers ($n = 2$), major collision investigation unit ($n = 1$), prosecutions ($n = 1$) and files and warrants ($n = 1$).

7.2 Measures

Participants completed a self-report questionnaire (See Appendix A), which began with a demographic section seeking information about gender, age, marital status, children, education, workplace location, length of time in Victoria police, rank, caseload type and workload (amount of work), amount of time spent with victims of crimes and/or trauma. This section also contained three open ended questions relating to the most rewarding and not so rewarding aspects of participants' duties and the reasons for choosing to work in their current location (see section 7.2.12). In addition, the questionnaire contained 11 self-report measures used to assess job characteristics, current

psychological functioning, personality characteristics, burnout, past history of trauma, police trauma experiences, levels of empathy, perceived social and work support, levels of secondary traumatic stress, post-traumatic stress symptoms, and coping styles. The 11 self-report measures are as follows:

7.2.1 Job Characteristic Variables. The current study used four separate questions (as used by Pines & Keinan, 1999) to assess Job Characteristic variables. The first question, "To what extent do you feel that your work is important and makes a significant contribution to society?" assessed Job Importance and was measured on a Likert scale from 1 ("not very important") to 5 ("very important"). The second question, "Estimate your level of performance at work" related to Job Performance and was ranked as a percentage (with 1% indicating very low performance and 100% very high performance). The third question, "How satisfied are you with being a police officer?" was concerned with Job Satisfaction and was measured on a Likert scale from 1 ("not at all") to 5 ("very satisfied"). Finally, the fourth question, "If another job was available, how likely is it that you would leave the police force?" estimated Job Turnover and was also measured using a Likert scale ranging from 1 ("not at all likely") to 5 ("very likely"). Job Satisfaction in particular was meant to encapsulate Figley's (1995a) construct of sense of achievement in helping others (thought to be associated with less STS). Overall, the Job characteristic variables were used as single item measures due to them being exploratory and the necessity for keeping the questionnaire to a manageable size.

7.2.2 Current Psychological Functioning. The Kessler Psychological Distress Scale – 10 (K-10; Kessler et al., 2002) was used to assess current psychological functioning. Respondents were presented with 10 psychological distress symptoms

(items), e.g. “In the past 4 weeks, about how often did you feel worthless?”, and had to indicate the extent to which they had suffered from those symptoms in the previous four weeks. Each item has five response categories ranging from 1 (“none of the time”) to 5 (“all of the time”) and possible overall scores range from 10 to 50 with a higher score indicative of increased psychological distress. Kessler et al. (2002) reported excellent internal consistency (α = .92 -.93) across major sociodemographic sub-samples and also very good discrimination between mood and anxiety disorders. The K-10 is able to strongly discriminate between cases and non cases of DSM-IV disorders in community samples and also to sensitively measure the severity of non-specific distress (Kessler et al., 2002). The K-10 has performed equally well in Australian community samples (Furukawa, Kessler, Slade & Andrews, 2003) and is reported to perform significantly better than the widely used General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988) in screening for psychological distress (Furukawa et al., 2003).

7.2.3 Personality Characteristics. A brief measure of the Big-Five personality dimensions, the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow & Swann, 2003), was used to examine participants’ standing on personality traits. The TIPI was developed for use in research when questionnaire space is limited, personality is not the primary topic of interest and an indication of personality domains is sufficient (Gosling et al., 2003). The TIPI contains 10 pairs of personality descriptors, representing Costa and McCrae’s (1992) Big-Five personality domains; Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness to Experience. Participants rate the extent to which they feel the traits apply to them from 1 (“disagree strongly”) to 7 (“agree strongly”). Two items are used for each domain, representing each end of the bi-polar

factor, for example, in order to measure Extraversion vs. Introversion, the items "extraverted, enthusiastic" and "reserved, quiet" are used. The second item was reverse scored so that a higher score on these two items indicates a stronger tendency to be extroverted. Possible scores for each domain range from 2 – 14. Gosling et al. (2003) reported low internal consistency estimates of .68, .40, .50, .73, and .45 for Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience scales respectively. However they suggested that this was due to the small number of items representing each scale and therefore test-retest correlations more accurately represent reliability. In this regard, mean test-retest correlation after 6 weeks was $r = .72$. In addition the domains on the TIPI showed very good convergent (mean $r = .77$) and discriminant validity (mean $r = .20$) with domains on the 44- item Big Five Inventory (BFI; John & Srivastava, 1999). Gosling et al. (2003) concluded that the convergences were analogous to other multi-item inventories of the Big Five personality factors.

7.2.4 Burnout. The Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986) was used to measure burnout. The 22 items on the MBI measure three aspects of burnout using 3 sub-scales, Emotional Exhaustion (9 items), Depersonalisation (5 items) and lack of Personal Accomplishment (8 items; Maslach & Jackson, 1986). The frequency with which participants experience feelings related to items on each subscale is assessed using a seven-point anchored response format ranging from 0 ("never") to 6 ("everyday"). The scores relating to each sub-scale are considered separately rather than being combined into a total burnout score. The Emotional Exhaustion scale measures feelings of being emotionally overextended and exhausted by work, for example, "Working with people all day is really a strain for me". Possible scores range from 0 to

54 and a higher score reflects a greater amount of experienced emotional burnout. The 5-item Depersonalisation scale measures the propensity to have an uncaring and impersonal response to the clients or recipients of service at one's workplace (in this study relating to victims of crime). An example of an item is, "I feel I treat some victims as if they were impersonal objects". Possible scores range from 0 to 30, again with higher scores reflecting more experienced burnout and depersonalisation. The subscale of Personal Accomplishment contains 8-items describing feelings of success and achievement in one's people orientated work (e.g. "I have accomplished many worthwhile things in this job"). Potential scores range from 0 to 48, however, unlike the other sub-scales it is lower scores on this subscale that indicate higher experienced burnout.

Maslach and Jackson (1986) report that reliability coefficients were .90, .79 and .71 respectively for Emotional Exhaustion, Depersonalisation and Personal Accomplishment, with test-retest correlations being .82 (Emotional Exhaustion), .60 (Depersonalisation) and .80 (Personal Accomplishment) for intervals of two to four weeks. Good convergent validity was demonstrated by Maslach and Jackson by correlating individual scores with independent behavioural ratings and by correlating MBI scores with job characteristics expected to contribute to burnout. In addition discriminant validity was obtained by correlating scores with other psychological constructs that could possibly confound burnout. For example, Job Satisfaction had moderate negative correlations with Emotional Exhaustion ($r = -.23$, $p < .05$) and Depersonalisation ($r = -.22$, $p < .02$) and a slight positive correlation with Personal Accomplishment ($r = .17$, $p < .06$).

7.2.5 Prior Trauma. This was assessed using the Traumatic Stress Institute (TSI) Life Event Questionnaire (LEQ - Short form – Revision 3; Mac Ian & Pearlman, 1992). This is a 19-item questionnaire that identifies individuals with childhood sexual, non-sexual and adult trauma histories. Participants are asked to indicate whether or not they have experienced the listed events in their lives and then to write the age(s) when the event occurred in their lives (Pearlman, 1996). Whilst Mac Ian and Pearlman (1992) report on the development of the TSI LEQ, they do not report any psychometric data on the questionnaire. They report its use in research in terms of reporting percentages of clients who have experienced various events only and emphasize its use as a clinical tool for bringing repressed material to the surface for counselling purposes.

7.2.6 Police Trauma Checklist. In order to establish what kinds of operational (work-related) trauma events the participants had experienced, an adapted version of the 28-item Policing Events Scale (Brown, Fielding & Grover, 1999) was used. The scale used in this study was a 31- item checklist of operational policing tasks. Based on the student researcher's own Police experience, item wording was changed in some instances to reflect appropriate phrasing for Victoria Police operational tasks (which were slightly different to those in Brown et al.'s study of English police officers). Three items were also added after consultation with some Victoria Police members in order to comprehensively identify stressful tasks.

Fourteen items are concerned with police officers' tasks involving victims (e.g., "dealing with sexually abused children"), 10 items are concerned with a danger to self or others (e.g., "unarmed offender – violent arrest") and 6 items involve dealing with motor vehicle collisions (e.g., "traffic accident – multiple fatality"). Participants were asked to

tick an item if they had experienced such an event in the last 6 months and to indicate the number of times such an event had occurred. In addition participants rated the event according to the amount of stress they felt using a 4-point Likert scale (1 = not stressful to 4 = extremely stressful). Brown et al. (1999) reported that a 3-factor solution (in terms of felt stress) accounted for the 28-items used in their study. Those factors were, a) 'Exposure to death and disaster' (accounting for 20.6 % of the variance), being lower frequency but high impact stressors, b) violence and injury (including exposure to victims; 9.4 % of the variance), higher frequency but lower-impact stressors and c) sexual crime (including rapes and sexually abused children; 6.9 % of the variance), intermediate frequency and moderate impact stressors. Cronbach's α reliability coefficients for each of these factors were .84 (for violence and injury), .79 (for violence and injury) and .78 (for sexual crime).

7.2.7 Empathy. This study used three (Perspective Taking, Empathic Concern and Personal Distress) of the four 7-item scales from the Interpersonal Reactivity Index (IRI: Davis, 1983; 1994). For these three scales, participants were presented with statements and were asked to indicate the degree to which the items describe them on a 5-point Likert scale (0 = "does not describe me well" to 4 = "describes me very well") with scores on each subscale ranging from 0 – 28. Perspective Taking items (e.g. "If I'm sure I'm right about something, I don't waste much time listening to other people's arguments") measure the participant's reported propensity to assume the psychological perspective of other persons in day-to-day life (Davis, 1994) whereas Empathic Concern items (e.g. "I often have tender, concerned feelings for people less fortunate than me") measure participants' proclivity to experience feelings of sympathy and compassion for

unfortunate others. The Personal Distress scale items (e.g. "I tend to lose control in emergencies") measure the tendency of the participant to experience distress and discomfort in response to suffering in others (Davis, 1994). The fourth scale, Fantasy, has been omitted; this scale requires participants to imagine themselves in the shoes of a fictitious character. Research has indicated that the Fantasy scale is somewhat unreliable as a measure of empathy (Lawrence, Shaw, Baker, Baron-Cohen & David, 2004). Davis (1994) reported that the internal Cronbach alpha α coefficients for the IRI ranged from .70 to .78 for all four scales. In addition the test-retest coefficients ranged from .61 to .81 over a two-month period and from .50 to .62 over a two-year period (Davis, 1994).

7.2.8 Social Support. An adapted version of the functional support items used in Stephens and Long's (1999) study of New Zealand Police was used in this study. For this scale participants were presented with five statements concerning the sort of supports that they may receive from different people and asked to indicate the degree (using a 5-point Likert scale) to which, a) their immediate supervisor, b) other people at work and c) their spouse or partner, friends or relatives provided support to them, from 1 = "very little" to 5 = "a great deal". One extra question was added to specifically include a question on the perceived amount of emotional support received from each of the different categories of people. In addition, the wording of one question (question 2) was altered so that the possible responses made sense (semantically); that is "How easy is it to talk with each of the following people?" was changed to "How much difficulty do you have talking to each of the following people". This question was then reverse scored before computing final scores for social support. Possible scores ranged from 5 to 25 for each category of people (i.e. Supervisor Support, Peer Support and Non-work Support)

with higher scores reflecting greater perceived support. The possible range of scores for the combined categories of Social Support (Total Social Support scores) was from 25 to 125. Reliability (Cronbach alpha coefficients) have been reported to range between .73 to .94 (LaRocco et al., 1980) and Stephens and Long (1999) reported coefficients ranging from .80 to .88 in their study.

7.2.9 Secondary Trauma. Secondary trauma was measured using the 17-item Secondary Traumatic Stress Scale (STSS; Bride et al., 2004). The STSS is comprised of three subscales containing 5 items measuring Intrusion (e.g. "I had disturbing dreams about my work with victims"), 7 items pertaining to Avoidance (e.g. "I felt emotionally numb") and 5 items examining Arousal (e.g. "I had trouble sleeping"). Respondents indicate how frequently an item is true for them in the preceding seven days using a 5-point Likert scale from 1 ("never") to 5 ("very often"). Scores are obtained by summing the items in each subscale and summing the subscales to obtain a total STSS scale. There is no reverse scoring and higher scores indicate a greater degree of experienced secondary trauma. Prevalence rates for STSD were obtained by using Bride's (2007) method, whereby participants had to report experiencing at least one Intrusion symptom, three Avoidance symptoms and two Arousal symptoms (to mirror requirements for PTSD classification). A symptom was presumed to be present if the item was endorsed as being experienced occasionally to very often.

Bride et al. (2004) reported very good internal consistency with coefficient alpha levels of .93 (for the total STSS scale), .80 (Intrusion sub-scale), .87 (Avoidance sub-scale), and .83 (Arousal subscale). They also reported good convergent validity, with scores correlating at expected levels with extent of traumatization in clients, frequency of

work with clients addressing traumatic stress and severity of depressive symptoms experienced by respondents. In addition discriminant validity was demonstrated by correlating scores with demographic variables such as age, ethnicity and income.

The STSS is the most appropriate measure of secondary trauma to use for a police population (Bride, B., personal communication, 1st August, 2005). As advised by Bride, changes were made to the wording of items as follows; the word "client" was replaced with "victim" in order to make sense to police participants, thus rendering the wording more congruent with police terminology. Unfortunately, the anchor "often" was inadvertently omitted from the survey, resulting in a four point rather than a five point scale. Although prevalence estimates were unlikely to be affected (see Chapter 9 for further discussion), an accurate comparison of means with previous studies was not possible.

7.2.10 Post Traumatic Stress Symptoms. The Impact of Event Scale - Revised (IES-R; Weiss & Marmar, 1997) was used to investigate the prevalence of posttraumatic stress symptoms as they are described in the DSM-IV. The IES-R is a 22-item self-report questionnaire, consisting of 7 items measuring Intrusion symptoms, 8 items measuring Avoidance symptoms and 7 items measuring Hyperarousal symptoms. Participants were presented with a list of difficulties that people sometimes have after stressful life events and had to rate how distressing (from 0 = "not at all" to 4 = "extremely") each difficulty was for them during the past 30 days. Whilst this questionnaire normally uses a time frame of seven days, it was decided to use 30 days for reasons of consistency (most scales measuring secondary trauma use a reference period of at least 30 days).

Prior to completing this questionnaire, participants were required to identify a recent stressful situation involving a crime or accident victim or relative of a victim and rate the extent to which they found the situation stressful (from 1 = "not very stressful" to 9 = "extremely stressful"). Participants then had to briefly describe the incident and explain what aspect of the situation made it so demanding. Participants were asked to complete the IES-R in relation to the recent stressful situation that they had described. Weiss and Marmar (1997) in a study of four different populations, reported that the internal consistency of each of the 3 subscales was very high, .87 to .92 (Intrusion subscale), .84 to .86 (Avoidance subscale) and .79 to .90 (Hyperarousal scale) for the Intrusion subscale. Weiss and Marmar also reported test-retest coefficients on two of the populations. The first being, .57 (Intrusion), .51 (Avoidance) and .59 (Hyperarousal) and the second being .94 (Intrusion), .89 (Avoidance) and .92 (Hyperarousal). The second study was reported to have had a shorter interval between assessments and a greater recency of the traumatic event, which resulted in higher coefficients (Hutchings & Devilly, 2004). Criterion, content and construct validity are reported to be very good for each of the subscales (Weiss & Marmar, 1997).

7.2.11 Coping. An inventory developed by Carver et al. (1989), the COPE Scale was used to measure situational adaptive coping. Nine of the COPE's 15 subscales were used in the current study, namely Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Seeking Social Support for Instrumental Reasons, Seeking Social Support for Emotional Reasons, Focus on and Venting of Emotions, Denial, Behavioural Disengagement, Mental Disengagement and lastly Alcohol Drug Disengagement. The 5 COPE subscales not used in this study were removed for the purpose of brevity and due to having no expected theoretical relationship to the variables

of interest. Each subscale is comprised of 4 items (with the exception of Alcohol Drug Disengagement which only has 1 item) and is measured on a 4-point Likert scale from 1 ("didn't do this at all") to 4 ("did this a lot"). Items include such statements as, "I discussed my feelings with someone," "I do what has to be done, one step at a time", and "I pretend that it hasn't really happened." Scores for each scale range from 4 to 16, with a possible total score range of 33 to 132. Higher scores suggest a greater use of that coping style.

Carver et al. (1989) reported Cronbach's alpha reliabilities of between .62 and .92. Only one scale, Mental Disengagement, had poor internal consistency of .45 and Alcohol-drug Disengagement had only one item and therefore the Cronbach's alpha could not be reported on. Test-retest reliabilities for the scales ranged from $r = .46$ to $r = .86$ in one sample, and from $r = .46$ to $r = .89$ in another. Convergent and discriminant validity was reported between COPE scales and selected personality measures of Optimism, Control, Self-Esteem, Internality, Hardiness, Type A, Monitoring, Blunting, Anxiety and Social Desirability.

7.2.12 Qualitative Questions. In addition to quantitative data, participants were asked three open-ended questions concerning their current employment. These were exploratory only and it was thought that they might further contribute to understanding the construct of Secondary Trauma. The first question "What are the best aspects of your current duties (i.e., most rewarding or satisfying aspects)?" was posed because Figley (1995a) speculates that if individuals were to receive a sense of satisfaction due to a belief they did in fact help a person or relieve a person's suffering then this could prevent STSD. The present study used an open ended question so as not to restrict participant responses when exploring what aspects of their duties were the most satisfying. The second question, "What are the worst aspects of your current duties (i.e., most frustrating

or distressing)?" was asked in order to elucidate whether or not stressful events or even secondary stressful events (when experienced by the recounting of a witness) were a major concern to participants. Finally, the third question, "Why did you chose to work in the area you are currently employed in?" was expected to uncover reasons and motives for being employed in a specific area. For instance, Van der Kolk and McFarlane (1996) speculated that persons may be attracted to police work in order to successfully resolve their own issues (e.g., childhood trauma) or perhaps because of an attraction to or addiction to functioning in stressful environments (Cozolino, 2005; Paton et al., 1999).

7.3 Procedure

Participants were recruited via a general mail out which included a letter of introduction and invitation to participate in the study, a questionnaire and a reply paid envelope. Participation was on a voluntary basis, was anonymous, and participants were free to withdraw at any time. Victoria Police research department assisted in the mail out by addressing 342 initial questionnaires which were posted to all homicide squad (n = 70), sexual crimes squad, and SOCAU (n= 233) members. In addition Victoria Police research also generated random lists (including work locations) of 100 general duties members from Regions 1, 2, 3, and 5. A further 108 questionnaires were sent to 23 crime scene offices (four or five per office depending upon the number of officers working at that location). The researcher also attended at some workplaces in order to provide details of the study and invite participants to take part in the research.

Out of a total 875 questionnaires distributed, 212 participants returned questionnaires, giving an overall return rate of 24.2 %. A return rate of 24.2% is

consistent with other recent research on Victoria Police, with response rates varying between 15% - 25% (Poznanski, J., personal communication 6th March, 2006).

Chapter 8 Results

8.1 Data Screening

Descriptive statistics and frequency tables were used to examine correct minimum and maximum scores, outliers, out of range scores and the accuracy of data entry for all independent and dependent variables. Cases with a small number of missing values (no more than 1 missing value per sub-scale) were retained. Missing values within individuals' sub-scale scores were replaced with the mean of the remaining items in the individual's sub-scale score. Providing missing data is not systematic and comprises no more than 10 percent of total data, it is unlikely to be problematic in the interpretation of results (Cohen & Cohen, 1983).

On an initial inspection of the data, it was found that two cases (cases 10 and 47) had implausible values across a range of variables and were excluded. Following these removals, further inspection of all continuous variables was conducted to identify univariate outliers. Total sub-scale scores were standardised for all independent and dependent variables, cases were considered to be extreme outliers if the standardised score was > 3.29. Scores exceeding these values were changed to three standard deviations from the mean thus retaining the score as a large value, but reducing its extreme influence (Tabachnick & Fidell, 2001). These identified outliers were deemed to be accurate data from the sampled population and were simply a reflection of the range of scores.

To identify multivariate outliers regression residuals statistics were calculated for each case. The criterion for multivariate outliers is Mahalanobis Distance at $p < .001$. Mahalanobis Distance is evaluated as χ^2 with degrees of freedom equal to the number of

variables. As there were six variables used in each multiple regression, any case with a Mahalanobis Distance greater than χ^2 (6) = 22.46 would be considered a multivariate outlier. There were three cases in each of the two regressions (one predicting STS and one predicting Emotional Exhaustion). For the STS regression, the Mahalanobis distances for each of the three cases were, 23.96, 25.61 and 28.41. For the Emotional Exhaustion regression, the Mahalanobis distances for each of the three cases were 24.40, 25.74 and 27.64. However as this study is predominantly exploratory in nature and these identified outliers were deemed to be accurate data from the sampled population the cases were retained in the regression equations.

Inspection of histograms, normal probability plots and detrended expected normal probability plots suggested that a number of variables were not normally distributed. Further analysis of normality was conducted by examining skewness and kurtosis values for each variable. Tabachnick and Fidell (2001) suggest a variable is substantially skewed when the value calculated for skew (skewness divided by its own standard error) is less than -3.29 or greater than 3.29.

However, it is to be expected that some of the data would be skewed in this population. For example, the majority of the sample were not exhibiting high scores on posttraumatic stress measures, which is to be expected as this is not a clinical population. Similarly, regarding the measures concerning the number of work events attended (e.g., "Taking a rape statement") it was not unusual that these scores would not be normally distributed given their nature. That is they were likely to have a high range and that some participants would have attended few events and some would have attended a lot.

These results were very dependent on work location (e.g., crime scene officers are more specialised and rarely attend some events, whereas SOCAU members should have attended a lot of sexual assaults, etc.) the rarity of some work events (i.e., cot deaths, police shootings) and the demographics of a work area itself (some geographical areas are just busier than others). Thus, in order to preserve the reality of such data it was decided to leave the data skewed rather than transforming them. Providing that the sample size is sufficient, most tests are relatively robust to violations of the assumption of normality (Tabachnick & Fidell, 2001).

8.2 Power Analysis and Sample Size

8.2.1 ANOVAS. Using Cohen's tables (Cohen, 1988; 1992), it was determined that for four groups, the required minimum sample sizes to detect a medium or large population effect size was 45 and 18 respectively (this was for a Power of .80 at $\alpha = .05$). Accordingly this study would be sufficiently powerful to detect medium or large effect sizes in this sample if they exist in the population. This study was not sufficiently powerful to detect small effect sizes (requiring a minimum of 274 participants).

8.2.2 Regressions. Required sample size for regression analysis is dependent upon a number of factors, including power requirements, alpha level selected, number of independent variables (or predictors), and expected effect sizes (Cohen, 1988; Pallant, 2005; Tabachnick & Fidell, 2001). For a medium size relationship (where $\alpha = .05$ and $\beta = .20$), the calculation for the required sample size necessary is $N > 50 + 8m$ (where m = number of independent variables; Pallant, 2005; Tabachnick & Fidell, 2001). In the present research the number of independent variables used in the regression analyses was

initially 13 (requiring a minimum of 154 participants) though this was reduced to six uniquely predictive variables (requiring a minimum of 98 participants). However when the dependent variable is skewed, more participants are required. The sample size in the current research is 210, which is more than sufficient even though the dependent variables STS and Emotional Exhaustion are positively skewed.

Using Cohen's tables, which indicate sample size required for a Power of .80 at α = .05, for six predictors a sample size of 97 is required for a medium population effect size to be detected and a sample size of 45 is required for a large population effect size to be detected (Cohen, 1988;1992). Accordingly the study had sufficient power to detect medium or large effects if they exist in the population.

8.2.3 Chi-square Analysis. Chi-square for independence is a non-parametric technique and therefore does not have the same stringent requirements about underlying population distribution (Cohen, 1988; Pallant, 2005). Using Cohen's (1988) power tables, it was determined that the study was sufficiently powerful to detect small to large relationships (effect sizes of .2 onwards), at $p = .05$, $u = 1$. The power level for a chi-square analysis of 200 participants is .81.

8.3 Initial Analyses

Means, standard deviations, theoretical range, Cronbach's alpha coefficients and norms for STS, current distress, the stressful event rating, and posttraumatic stress are presented in Table 1. Police participants had lower scores on PTSD when compared to Australian Vietnam veterans, lower scores on all the burnout scales compared to norms (including police) and slightly higher scores on Current Distress than Australian general

community norms. In considering Research Question 1 (concerned with how police score on STSS in relation to others), the overall prevalence of STSD amounted to 13% of participants, less than Bride's (2007) sample of social workers (15.2%). Direct comparison of the STSS means was not possible as discussed in section 7.2.9.

Table 1

Means, Standard Deviations, Observed and Theoretical Ranges, Alphas and Norms of STS, Current Distress, Stressful Event, PTSD, and Burnout

Variables	*M*	*SD*	Theoretical Range	α	Norms *M*	*SD*
Secondary Traumatic Stress Scale						
Intrusion	7.53	3.02	6-24	.86	8.18[1]	3.04
Avoid	11.54	4.46	7-28	.86	12.58[1]	5.00
Arousal	8.65	3.40	5-20	.84	8.93[1]	3.56
Total STS	27.70	10.17	17-68	.94	29.69[1]	10.74
Current Distress (K-10)	17.16	6.45	10-50	.93	14.20[2]	5.07
Stressful Event	5.98	2.31	1-9	n/a	n/a	n/a
Impact of Event Scale – Revised						
Avoid	.83	.87	0-4	.89	1.59[3]	1.03
Intrusion	1.01	.96	0-4	.93	1.75[3]	1.11
Hyper-arousal	.65	.90	0-4	.90	2.21[3]	1.22
Total IES-R	.83	.85	0-4	.96	1.82[3]	1.05
Maslach Burnout Inventory						
Emotional Exhaustion	20.08	11.28	0-54	.91	23.14[4]	11.39
Personal Accomplishment	32.35	7.53	0-48	.76	37.12[4]	6.85
Depersonalisation	7.59	6.01	0-30	.76	8.86[4]	6.38

Note. STS = Secondary Traumatic Stress, IES-R = Impact of Event Scale Revised
[1] social workers (US; Bride, 2007)
[2] Australian norms (Andrews & Slade, 2001; Sunderland, M., personal communication 17 March, 2008)
[3] Australian Vietnam veterans community sample (Creamer, Bell & Failla, 2003)
[4] US population (including police, social workers and mental health workers, nurses & doctors; Maslach & Jackson, 1986)

Means, standard deviations, theoretical range, Cronbach's alpha coefficients and norms for theoretical vulnerabilities to the development of STS (that is Empathy, Age, Past Trauma, Professional Experience (length of time in the police force in years), Workload (total number of trauma cases) and Trauma Hours (total number of hours seeing victims of crime), number of victim events and severity of victim events traumatic events) are presented in Table 2.

Further means, standard deviations, theoretical range, Cronbach's alpha coefficients and norms for remaining vulnerabilities to the development of STS (Personality, Social Support, Coping and Job Characteristic variables) in the development of STS are presented in Table 3.

Table 2

Means, Standard Deviations, Observed and Theoretical Ranges, Alphas and Norms of Theoretical Vulnerabilities to STS

Variables	*M*	*SD*	Theoretical Range	α	Norms *M*	*SD*
Empathic Concern	17.09	4.64	0-28	.80	20.36[1]	4.02
Empathic Perspective	16.49	4.38	0-28	.77	17.37[1]	4.79
Personal Distress	5.57	3.36	0-28	.71	10.87[1]	4.78
Age	39.82	7.25	n/a	n/a	n/a	n/a
Past Trauma	4.50	2.83	n/a	n/a	n/a	n/a
Professional Experience	17.08	8.22	n/a	n/a	n/a	n/a
Workload (cases)	8.26	13.45	n/a	n/a	n/a	n/a
Trauma hours (per week)	10.08	10.79	n/a	n/a	n/a	n/a
No. of Victim Events	16.97	19.56	n/a	n/a	n/a	n/a
Victim Stress Severity	84.81	98.30	n/a	n/a	n/a	n/a

[1] US college students (Bellini, Baime, & Shea, 2002)

Table 3

Means, Standard Deviations, Observed and Theoretical Ranges, Alphas and Norms of Further Proposed Vulnerabilities in the Development of STS

Variables	*M*	*SD*	Theoretical Range	α	Norms *M*	*SD*
Personality						
Extraversion	4.62	1.51	1-7	.73	4.44[1]	1.45
Agreeableness	5.20	1.15	1-7	.46	5.23[1]	1.11
Conscientiousness	5.96	.95	1-7	.48	5.40[1]	1.32
Emotional Stability	5.39	1.26	1-7	.58	4.83[1]	1.42
Openness	5.06	1.05	1-7	.31	5.38[1]	1.07
Social Support						
Supervisor Support	3.19	1.68	5-25	.89	3.28[2]	1.00
Peer Support	3.38	.80	5-25	.83	3.16[2]	.76
Non-Work Support	4.30	.83	5-25	.89	4.09[2]	.85
Total Social Support	3.62	.62	25-100	.84	n/a	n/a
Coping						
Active Coping	10.59	2.86	4-16	.74	10.69[3]	3.18
Planning	11.22	3.55	4-16	.92	11.86[3]	3.08
Instrumental Support	10.07	3.70	4-16	.91	9.69[3]	3.39
Emotional Support	8.57	3.65	4-16	.89	11.08[3]	3.60
Vent	6.40	2.76	4-16	.88	10.37[3]	3.50
Denial	4.67	1.40	4-16	.81	5.57[3]	2.28
Behavioural Disengagement	5.29	2.06	4-16	.90	6.03[3]	2.22
Mental Disengagement	7.16	2.35	4-16	.66	8.07[3]	2.86
Alcohol	1.47	0.79	1-4	n/a	1.29[3]	.72
Job Satisfaction Variables						
Job Importance	4.00	1.12	1-5	n/a	4.1[4]	.85
Job Performance	85.25	12.49	0-100	n/a	86.8[4]	9.80
Job Satisfaction	3.89	1.08	1-5	n/a	3.8[4]	1.00
Turnover Intent	2.40	1.27	1-5	n/a	2.9[4]	1.20

[1] Texas (US) undergraduate students (Gosling et al., 2003)
[2] New Zealand police members (Stephens & Long, 1999)
[3] University undergraduates (Carver et al., 1989)
[4] Israeli Police Officers (Pines & Keinan, 2007)

8.4 Examining Theoretical Vulnerabilities to STS: Correlates of STS

This section relates to Research Question 2 (are the proposed vulnerabilities to STS actually associated with STS?) and Research Question 3 (examining if police evidence more trauma than other community groups).

8.4.1 Empathy. Bivariate correlations (see Table 4) between the study's outcome variable, STS, and the three empathy variables of Empathic Concern, Perspective Taking and Personal Distress indicate that whilst experiencing Personal Distress when dealing with victims was moderately associated with higher scores on the STSS ($r = .35$, $p < .01$), Empathic Concern and Perspective Taking were not significantly related to STS.

Table 4
Pearson's Correlations Between Dependent Variable, STS, and Empathy Variables

	STS	Empathic Concern	Perspective Taking	Personal Distress
STS	1.00			
Empathic Concern	.04	1.00		
Perspective Taking	-.06	.47**	1.00	
Personal Distress	.35**	.16*	-.08	1.00

Note. *p<0.05 two tailed. **p<0.01, two tailed.

In view of the suggestion that trauma occurring to children (Figley, 1995) and sexual abuse trauma (Trippany et al., 2004) would be more likely to trigger STS than other traumas, data were collected on the different specific types of trauma. Accordingly caseload was measured in the form of the number of briefs of evidence or files that each participant was responsible for, in relation to (a) child sexual abuse; (b) other trauma (not

sexual abuse) to children; (c) adults who were sexually abused as children; and (d) other trauma occurring to adults. In addition, data were also collected relating to the actual workload (number of hours) spent with victims; (a) hours spent with child victims of sexual abuse; (b) hours spent with child victims of other trauma; (c) hours spent with adult victims of sexual assault; and (d) hours spent with adult victims (or their relatives) of other trauma.

There were no significant correlations between caseload type and STS nor between workload type and STS. In view of the lack of association, it was decided to simplify the data by combining the caseload and workload variables into two overall variables of (a) "Total Trauma Caseload" and (b) "Total Trauma Hours". Correlation analyses between these two variables again revealed no significant association between either "Total Trauma Caseload" or "Total Trauma Hours" and the dependent variable STS (see Table 5).

8.4.2 Age, Prior Trauma, and Professional Experience. Bivariate correlations were also carried out with three variables expected to contribute to the development of STS based on previous research concerning STS. Correlations with Age, Prior Trauma (own past trauma), and years of Professional Experience can be seen in Table 5. None of the variables significantly correlated with STS.

Table 5

Pearson's Correlations Between Dependent Variable, STS and Proposed Vulnerabilities, Age, Prior Trauma, Years of Experience, Total Trauma Caseload, and Total Trauma Hours

	STS	Age	Prior Trauma	Years	Total Trauma Caseload	Total Trauma Hours
STS	1.00					
Age	-.08	1.00				
Prior Trauma	.12	.24**	1.00			
Years	-.10	.81**	.16*	1.00		
Total Trauma Caseload	-.02	.17*	.02	.20**	1.00	
Total Trauma Hours	.10	-.22**	.02	-.22**	.25*	1.00

Note. *p<0.05 two tailed. **p<0.01, two tailed.

8.4.3 Gender, Children, and Childhood Trauma. Chi-Square tests were conducted on the dichotomised variables of Gender, Children, and Childhood Trauma to examine if they significantly impacted on the presence of STS. Participants were considered to have STS disorder (STSD) if they met the same criteria as they would have to for PTSD, that is, if they reported experiencing one or more intrusion symptom and three or more avoidance symptoms and two or more arousal symptoms. This method of "caseness" was used by Bride (2007) in order to determine the presence of STSD in a social worker population. Bride considered a symptom to be present if a participant reported experiencing it "occasionally", "often" or "very often".

Nevertheless, none of the variables (Gender, Children, or Childhood Trauma) made any significant contribution to the presence of STSD; the proportion of males that had STSD was not significantly different to the proportion of females, the number of

police officers with STSD did not differ significantly on the basis of whether they had children or not, and the presence of Childhood Trauma did not significantly impact upon the number of police officers who met the criteria for STSD.

With regards to Research Question 3, which is concerned with the question as to whether police have more prior trauma than other community groups, a total of 30.6% of participants (34.8% of males and 23% of females) indicated that they had suffered childhood abuse (sexual or physical), similar to the prevalence of childhood abuse (33.1%) in studies of mental health professionals (e.g., Pope & Feldman-Summers, 1992) and similar to the rates of childhood physical abuse (28.4%) in the general population (e.g., Hussey et al., 2006). The greater proportion of males reporting child abuse compared to females in the current project is in contrast to Follette et al.'s (1994) study of police, which found that more police women (40%) than police men (17.1%) reported historical childhood abuse, though the current study's percentage difference by gender was non-significant. Nevertheless, there is no evidence to suggest that police in the current study do evidence larger rates of childhood abuse than other community groups.

8.4.4 Personality and Social Support. Correlations with personality facets and STS can be seen in Table 6, whilst the correlations between STS and the three sources of Social Support along with the combined Total of Social Support can be seen in Table 7.

The only personality variable to significantly correlate with STS was Emotional Stability, suggesting that the more emotionally stable a participant's personality was, the lower their symptomatology on measures of STS. All the measures of social support significantly negatively correlated with STS, with Peer Support having the strongest association, followed by supervisor support and non-work (family and friends) support,

indicating that greater amounts of all types of social support were associated with lower STS scores.

Table 6

Pearson's Correlations Between Dependent Variable, Secondary Traumatic Stress, and Personality Variables

	STS	Extraversion	Agreeableness	Conscientiousness	Emotional Stability	Openness
STS	1.00					
Extraversion	-.06	1.00				
Agreeableness	-.13	.08	1.00			
Conscientiousness	-.12	-.02	.09	1.00		
Emotional Stability	-.46**	.12	.31**	.27**	1.00	
Openness	-.13	.35**	.29**	.06	.30**	1.00

Note. *p<0.05, two tailed. **p<0.01, two tailed.

Table 7

Pearson's Correlations Between Dependent Variable, Secondary Traumatic Stress, and Social Support Variables

	STS	Supervisor Support	Peer Support	Non-work Support	Total Support
STS	1.00				
Supervisor Support	-.31**	1.00			
Peer Support	-.35**	.40**	1.00		
Non-work Support	-.28**	.07	.16*	1.00	
Total Support	-.45**	.78**	.72**	.56**	1.00

Note. *p<0.05 two tailed. **p<0.01, two tailed.

8.4.5 Coping. Correlations with the nine coping variables revealed no significant association between STS and four of the variables, Active Coping, Planning, Instrumental Support or Seeking Emotional Support. However there were significant low to moderate correlations (see Table 8 below) with the remaining five variables (more negative forms of coping), all of which were associated with higher scores on STS.

Table 8

Correlations between STS and Five Coping Variables of Vent, Denial, Behavioural Disengagement, Mental Disengagement, and Alcohol Use

	STS	Vent	Denial	Behavioural Disengagement	Mental Disengagement	Alcohol Use
STS	1.00					
Vent	.24**	1.00				
Denial	.40**	.18*	1.00			
Behavioural Disengagement	.42**	.35*	.50**	1.00		
Mental Disengagement	.31**	.31**	.33**	.37**	1.00	
Alcohol Use	.44**	.17*	.20**	.30**	.35**	1.00

Note. *p<0.05 two tailed. **p<0.01, two tailed.

8.4.6 Job Characteristic Variables. Bivariate Pearson's correlations with job satisfaction variables revealed small to moderate associations with STS (See Table 9). Participants who attributed a low level of importance to their occupation, reported a low level of performance, experienced less satisfaction with being a police officer, and who

would be more likely than other police to leave their job if another was available tended to have higher STS scores.

Table 9

Correlations Between Job Characteristic Variables and STS

	STS	Job Importance	Performance Level	Job Satisfaction	Turnover Intent
STS	1.00				
Job Importance	-.27**	1.00			
Performance Level	-.17*	.37**	1.00		
Job Satisfaction	-.33**	.47**	.39**	1.00	
Turnover Intent	.34**	-.26**	-.24**	-.56**	1.00

Note. *p<0.05 two tailed. **p<0.01, two tailed.

8.5 Group Differences

8.5.1 Gender Differences. Univariate ANOVAs were used to determine if there were any differences on scores of Current Distress (K-10), STS, or the Emotional Exhaustion scale of burnout for males (n = 134) and females (n = 75). There were no significant differences found on the K-10, STS, or Emotional Exhaustion scores on the basis of Gender.

8.5.2 Workload Hours and Caseload Type. Means and standard deviations of Workload Hours (according to type of trauma) and Caseload Type can be seen in Table 10. Univariate ANOVAS indicated that there were significant differences between the work locations in terms of hours per week spent with the victims of various crimes. This was true for hours spent with victims of child sexual assault [$F(3, 80.99) = 116.29$, $p <$

.01, $\eta^2 = .56$], hours spent with child victims of other trauma [$F(3, 97.81) = 66.42$, $p <$ .01, $\eta^2 = .44$], hours spent with adult victims of sexual assault [$F(3, 103.78) = 94.42$, $p <.01$, $\eta^2 = .54$], and hours spent with adult victims of other trauma [$F(3, 117.30) = 4.60$, $p < .01$, $\eta^2 = .05$] (using Brown-Forsythe F statistic due to violation of the assumption of homogeneity of variance).

Table 10
Means and Standard Deviations of Workload Hours and Caseload Type according to Work Location

	Work Location			
	General duties $N = 49$ *M (SD)*	Other duties $N = 71$ *M (SD)*	SOCAU $N = 67$ *M (SD)*	Crime Squads $N = 22$ *M (SD)*
Workload Hours (per week)				
Sex assault children	.25 (.76)	.09 (.41)	6.32 (4.42)	.23 (1.07)
Other trauma children	.60 (.98)	.29 (.81)	5.09 (4.10)	.74 (1.55)
Sex assault adults	.46 (1.14)	.25 (.75)	5.74 (3.78)	.86 (1.67)
Other trauma adults	3.52 (4.10)	5.30 (9.20)	2.10 (2.79)	6.07 (5.67)
Caseload (briefs/files)				
Sex assault children	.73 (4.28)	.37 (1.87)	6.00 (7.49)	1.77 (3.70)
Other trauma children	1.90 (5.64)	.23 (.87)	3.81 (4.37)	2.95 (5.47)
Adults historical sex abuse	.51 (2.58)	.11 (.65)	2.16 (2.90)	1.00 (2.41)
Sex assault adults	.47 (2.58)	.06 (.29)	2.12 (2.93)	1.45 (3.73)
Other trauma adults	4.68 (11.88)	.63 (1.40)	.87 (4.30)	11.00 (24.04)

There were also significant differences in the number of briefs or files the officers were responsible for at the different work locations (means and standard deviations shown in Table 10). This was the case for briefs pertaining to the sexual assault of children [F (3, 133.46) = 19.59, $p<.01$, $\eta^2 = .2$] and other trauma occurring to children [F (3, 85.03) = 7.13, $p< .01$, $\eta^2 = .12$], as well as briefs concerned with adults who were

sexually abused as children [F (3,114.04) = 9.71, p< .01, η^2 = .13], current sexual assault of adults [F (3, 65.21) = 7.01, p< .01, η^2 = .10] and adults with other trauma [F (3, 31.47) = 3.50, p<.01, η^2 = .12].

As expected, planned comparisons revealed that SOCAU police spent significantly more time (hours) with child victims of both sexual assault [F (1, 69.28) = 125.89, p< .01] and other trauma [F (1, 73.98) = 77.62, p< .01] as well as with adult victims of sexual assault [F (1, 75.17,) = 116.21, p< .01] than all of the other work locations. Moreover, SOCAU members were responsible for significantly more briefs or files relating to adult sexual assault victims [F (1, 92.95) = 9.92, p< .01], child victims of sexual assault [F (1, 83.52) = 26.63, p<.01] and child victims of other trauma [F (1, 106.89) = 8.76, p<.01] when compared to the all the other work locations.

Univariate ANOVAs were also carried out to examine the differences on scores of Current Distress, STS and the Emotional Exhaustion scale based on work location. There were statistically significant differences between the work locations in terms of scores on Current Distress [F (3,206) = 3.70, p = .01, η^2 = .05], and scores on STS [F (3,181.55) = 7.47, p <.001, η^2 = .09] (using Brown-Forsythe robust test of equality of means for STS). ANOVA results suggested there were no significant differences between groups on scores of Emotional Exhaustion. Table 11 shows that the mean scores for STS, K-10 and Emotional Exhaustion were very similar across the work locations (with the exception of the crime squads whose means were lower across all measures).

Table 11

Means and Standard Deviations of Current Distress, STS, and Emotional Exhaustion Scores according to Work Location

Work Location	K-10			STS			Emotional Exhaustion		
	n	*M*	*(SD)*	*n*	*M*	*(SD)*	*n*	*M*	*(SD)*
General duties	49	18.73	(7.18)	49	31.02	(10.88)	49	21.14	(12.18)
Other duties	71	16.37	(6.41)	70	25.95	(8.82)	70	19.31	(11.02)
SOCAU	68	17.93	(6.24)	68	29.29	(10.91)	68	21.79	(11.43)
Crime Squads	22	13.86	(3.69)	22	21.09	(5.81)	22	14.86	(7.94)

Planned comparisons revealed that there were no statistically significant differences between SOCAU, general duties and others duties when comparing mean scores of Current Distress, STS and Emotional Exhaustion. In contrast, planned comparisons showed that officers in Crime Squads scored significantly less on measures of Current Distress [F (1,206) = 7.13, $p < .05$], STS [F (1, 39.32) = 27.67.59, $p < .01$] and Emotional Exhaustion [F (1,205) = 5.47, $p < .05$] when compared to the other work locations.

8.5.3 Hypothesis 1. The hypothesis that SOCAU police officers would evidence more STS than other police officers was not supported. Despite having a higher sexual trauma caseload and spending more hours in contact with both adult and child victims of sexual assault (theoretical antecedents of increased STS), SOCAU did not have the highest scores on STS. SOCAU scores on the Emotional Exhaustion scale of burnout were only slightly (but not significantly) higher than general duties police and other police duties participants.

8.6 Is there sufficient distinction between measures of PTSD, STS and burnout?

The next sections address Research Question 4 in order to examine any overlap in the measures of PTSD, STS and burnout. In particular, whether there is sufficient distinction between the STSS and the Emotional Exhaustion sub-scale of the MBI. An initial examination of correlations between the scales is presented, followed by multiple regressions predicting both STS and then Emotional Exhaustion (using the same predictors).

8.6.1 Examining associations between STS, IES-R and burnout. In order to further examine correlates of the STS measure, correlations were obtained between STS and measures of Current Distress (K-10), PTSD (IES-R) and Maslach's burnout measures (see Table 12). An inspection of these correlations indicated that the STS scale was highly correlated with IES-R, and also highly correlated with the Emotional Exhaustion scale of burnout. The high correlation with the IES-R ($r = .70$, $p<.01$) was expected, due to the STSS endeavouring to measure the same sort of PTSD symptomatology as the IES-R (albeit in a vicarious way for STS). However the high correlation between STS and Emotional Exhaustion ($r = .69$, $p< .01$) was unexpected and suggests strong convergence between the two constructs. Similarly troubling is the very high correlation between STS and the K-10 ($r =.75$, $p<.05$), the measure of Current Distress. STS correlated only moderately with the Depersonalisation subscale of Maslach's burnout measure and did not significantly correlate at all with Personal Accomplishment.

Table 12
Pearson's Correlations Between Dependent Variable, STS, and Variables, K-10, IES-R, and Maslach's Burnout Sub-Scales

	STS	K-10	IES-R	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
STS	1.00					
K-10	.75**	1.00				
IES-R	.70**	.71**	1.00			
Emotional Exhaustion	.69**	.66**	.55**	1.00		
Depersonalisation	.47**	.37**	.27**	.52**	1.00	
Personal Accomplishment	-.10	-.16*	-.11	-.12	-.11	1.00

Note.STS = Secondary Traumatic Stress, K-10 = current distress, IES-R = Impact of Event Scale – Revised. *p<0.05 two tailed. **p<0.01, two tailed.

8.6.2 Predictors of STS: Multiple Hierarchical Regressions. Theory suggests that the predictors of STS include past trauma history; a greater percentage of sexual abuse in one's Workload; Gender; Age; having one's own children; work experience and Empathy (particularly Empathic Concern). Unfortunately, none of these theorised predictors significantly correlated with STS in the current study.

Accordingly, in order to uncover the predictors of STS for this sample, a hierarchical regression was conducted by using the variables that had significant bivariate correlations with STS. An initial hierarchical multiple regression was conducted to assess whether STS could be predicted from the Stressful Event rating, Personal Distress (empathy), Emotional Stability, Total Social Support, and the five coping variables (Vent, Denial, Behavioural Disengagement, Mental Disengagement and Alcohol) as Step 1, the job satisfaction variables (Step 2) and Emotional Exhaustion (Step 3). This revealed that some variables were not significant when entered into the regression equation. Accordingly, in order to simplify matters, these variables (the Stressful Event

rating, Personal Distress, Vent, Behavioural Disengagement, Mental Disengagement, Job Importance, Job Performance, and Job Satisfaction) were removed from the equation and a further hierarchical regression was conducted (see Table 13). This regression included the predictor variables of Emotional Stability, Total Social Support, Denial and Alcohol in Step1, added Turnover Intent at Step 2 and finally Emotional Exhaustion was entered at Step 3 with STS as the dependent variable.

As can be seen in Table 13, in the first step, Emotional Stability, Total Social Support and the coping strategies of Denial and Alcohol predicted 48% of the variance in STS scores [F (4,190) = 44.60, $p < .001$], with the strength of all predictors being reasonably equal in size, but with Alcohol being the strongest of predictors. When Turnover Intent was added to the equation at Step 2, this significantly increased the prediction of the variance in STS by a further 3% [F (5, 189) = 39.53, $p < .001$]. The strongest predictor of STS was still Alcohol, followed by Emotional Stability (negative relationship), Total Social Support (negative relationship) and Denial, then Turnover Intent. At Step 3, Emotional Exhaustion was added to the equation, predicting a further 7% of the variance in STS [F (6, 188) = 44.06, $p < .001$]. At this third step, Emotional Exhaustion became the strongest predictor of STS, followed by Alcohol, Denial, Emotional Stability, and finally Social Support (Turnover Intent was no longer a significant predictor of STS within the regression equation). All variables together predicted a substantial 58% of STS.

Table 13

Hierarchical Multiple Regression Analysis Output with STS as Dependent Variable

Predictor	B	SE B	β	Sr^2	R^2	ΔR^2
Step 1					.48	.48***
Emotional Stability	-2.15	.46	-.27***	.06		
Total Social Support	-4.43	.92	-.27***	.06		
Denial	1.94	.39	.27***	.07		
Alcohol	3.84	.70	.30***	.08		
Step 2					.51	.03**
Emotional Stability	-1.97	.45	-.25***	.04		
Total Social Support	-3.90	.92	-.24***	.05		
Denial	1.76	.39	.24***	.05		
Alcohol	3.94	.68	.31***	.09		
Turnover Intent	1.38	.43	.17**	.03		
Step 3					.58	.07***
Emotional Stability	-1.15	.44	-.14*	.01		
Total Social Support	-2.17	.90	-.13*	.01		
Denial	1.35	.36	.19***	.03		
Alcohol	2.63	.67	.20***	.03		
Turnover Intent	.66	.42	.08	.01		
Emotional Exhaustion	.35	.06	.39***	.07		

Note: B = Unstandardised Beta Coefficient, β = Standardised Beta Coefficient, Sr^2 = unique variance, $R^{2\,=}$ R square, ΔR^2 = R square change. *$p < .05$, ** $p < .01$, *** $p < .001$

8.6.3 Predictors of Emotional Exhaustion: Multiple Hierarchical Regressions.

Given the high correlation existing between Emotional Exhaustion and STS and the potential construct validity issues arising from that relationship, it was decided to examine whether the predictors of STS could predict Emotional Exhaustion equally well. Accordingly a hierarchical regression was conducted by including Emotional Stability,

Total Social Support, Denial, and Alcohol as predictor variables at step 1, adding Turnover Intent at Step 2 and finally STS at Step 3 (see Table 14).

Table 14
Hierarchical Multiple Regression Analysis Output with Emotional Exhaustion as Dependent Variable

Predictor	B	SE B	β	Sr^2	R^2	ΔR^2
Step 1					.46	.46***
Emotional Stability	-2.64	.52	-.30***	.07		
Total Social Support	-5.78	1.05	-.32***	.09		
Denial	1.47	.44	.18**	.03		
Alcohol	3.62	.79	.25***	.06		
Step 2					.51	.05***
Emotional Stability	-2.38	.51	-.27***	.06		
Total Social Support	-4.98	1.02	-.28***	.06		
Denial	1.20	.43	.15**	.02		
Alcohol	3.76	.76	.26***	.06		
Turnover Intent	2.06	.48	.23***	.05		
Step 3					.58	.07***
Emotional Stability	-1.53	.49	-.17**	.02		
Total Social Support	-3.30	.99	-.18**	.02		
Denial	.44	.42	.05	.00		
Alcohol	2.06	.76	.14**	.02		
Turnover Intent	1.47	.45	.17**	.02		
STS	.43	.08	.39***	.07		

Note: B = Unstandardised Beta Coefficient, β = Standardised Beta Coefficient; Sr^2 = unique variance, R^2 = R square, ΔR^2 = R square change.
*$p < .05$, ** $p < .01$, *** $p < .001$.

The variables in the first step explained 46% of the variance in Emotional Exhaustion [F (4,190) = 40.00, $p < .001$] (similar to their contribution to STS), with Total Social Support (negative relationship) being the strongest predictor, followed closely by

Emotional Stability (negative relationship), Alcohol then Denial. Adding Turnover Intent to the equation contributed a further 5% to explaining the variance between the predictors and Emotional Exhaustion [F (5,189) = 38.72, $p < .001$]. The strongest predictor at Step 2 was still Total Social Support followed by Emotional Stability, Alcohol, Turnover Intent and Denial. At Step 3, adding STS as a predictor contributed a further 7% in explaining the variance of Emotional Exhaustion [F (6,188) = 43.27, $p < .001$] (identical to the contribution of Emotional Exhaustion in explaining the variance in STS scores). STS was the strongest predictor followed by Total Social Support (negative relationship), Emotional Stability (negative relationship) and Turnover Intent, and Alcohol, though Denial was no longer significant at the third step.

The results seem to suggest that there might be construct validity problems with the STSS, given the high Pearson's correlation coefficient of .69, $p < .001$ and the emerging pattern of predictions indicated by the hierarchical regressions predicting STS and Emotional Exhaustion. The same pattern of predictors that predict 51% of the variance of STS (at Step 2 of the hierarchical regression) also predicts 51% of the variance in Emotional Exhaustion. In the final step of each equation, that is adding Emotional Exhaustion to the equation predicting STS and STS to the equation predicting Emotional Exhaustion, both additions contribute 7% of additional variance to the total fit of the model. Therefore in this study at least, there appears to be strong convergence between the STSS and the measure of Emotional Exhaustion suggesting that they are in fact measuring the same construct. Perhaps further information can be gained by examining the predictors of PTSD arising in the current study, which after all, is what STSD is supposed to mirror (Figley, 1995a).

8.6.4 Measuring PTSD: The Stressful Event. Prior to rating symptoms of PTSD (using the IES-R), participants were required to nominate a recent vicariously experienced victim related stressful event. One hundred and forty participants recalled such an event. Seventy participants did not nominate an event. There was a range of events reported including the investigation of rapes and also investigations into the abuse and indecent assaults of children. Some of the events represented the most dreadful acts carried out by persons, such as the sexual assault of an elderly person, and the murder of a child by an aggrieved partner who subsequently committed suicide. One SOCAU participant wrote that they "took a particularly graphic statement, detailing how a woman had to hold her children down while her husband and others raped her children." Two officers nominated investigating the murder of a police officer as their recent stressful event and yet another officer detailed being informed of an incident whereby a young mother had pulled 9 of 10 fingernails out of a 3 month old infant's fingers. This officer indicating that they had felt shocked and sickened by the notification, feeling sorry for the infant.

Initial correlations indicated that the total STS score had a medium strength positive correlation with the Stressful Event rating ($r = .35$, $p < .001$), whereas the IES-R had a large positive correlation ($r = .55$, $p < .001$). That is, the more stressful an event was rated, then the higher the score for STS and PTSD symptoms, with the latter relationship being stronger. However, the Stressful Event did not remain significant when entered into a regression equation predicting STS, whereas it remained an important predictor of PTSD symptoms.

8.6.5 Predictors of PTSD: Multiple Hierarchical Regressions. A hierarchical regression was conducted using the variables that had significant bivariate correlations with PTSD. As per the procedure used for the prediction of STS (described in section 8.6.2 of this report), variables that ceased being significant when entered into the regression equation were removed (for simplicity) and a further hierarchal regression was conducted with the remaining variables (see Table 15). The predictor variables of Stressful Event, Social Support and Denial were entered at Step 1, followed by STS at Step 2 and finally Emotional Exhaustion as step 3 with PTSD as the dependent variable.

Table 15
Hierarchical Multiple Regression Analysis Output with PTSD as Dependent Variable

Predictor	B	SE B	β	Sr^2	R^2	ΔR^2
Step 1					.51	.50
Stressful Event	.17	.02	.46***	.20		
Total Social Support	-.44	.09	-.32***	.10		
Denial	.18	.04	.30***	.09		
Step 2					.63	.12
Stressful Event	.13	.02	.35***	.11		
Total Social Support	-.21	.08	-.16*	.02		
Denial	.09	.04	.16*	.02		
STS	.04	.01	.44***	.12		
Step 3					.63	.00
Stressful Event	.13	.02	.35***	.11		
Total Social Support	-.19	.09	-.14*	.01		
Denial	.09	.04	.15*	.02		
STS	.03	.01	.41***	.07		
Emotional Exhaustion	.01	.01	.06	.00		

Note: B = Unstandardised Beta Coefficient, β = Standardised Beta Coefficient; Sr^2 = unique variance, R^2 = R square, ΔR^2 = R square change.
*$p < .05$, ** $p < .01$, *** $p < .001$.

The variables in the first step contributed to 51% of the variance in PTSD [$F(3,130) = 44.91, p < .001$] with the stressful event making the most important contribution over and above Total Social Support (negative relationship) and Denial. Adding STS contributed a further 12% to explaining the variance in scores of PTSD [$F(3,129) = 44.91, p < .001$]. However, the addition of Emotional Exhaustion made no further significant contribution. This is perhaps somewhat unsurprising given the convergence between STS and Emotional Exhaustion, simply adding further evidence for their lack of differentiation.

8.7 Qualitative Responses

The data were analysed by using a rudimentary form of content analysis. Whilst there are numerous definitions of content analysis, most are concordant with the notion that content analysis is a systematic and objective attempt to examine the content of communication in a quantitative manner (Gray, Williamson, Karp & Dalphin, 2007; Wimmer & Dominick, 1994).

In the current study, qualitative answers were segregated on the basis of work location (SOCAU, Crime Squads, General Duties, Crime Scene Officers and Others). The main researcher read over the answers to the questions in order to identify recurrent manifest themes/categories. Once categories were identified, each of the answers were then colour coded, according to the defined category the statement(s)/sentence(s) belonged to (see Appendix B, for detailed coding system, including colour scheme for each question and detailed explanation for each category within each question). The number of statements which then fit into each category was totaled for each participant

and put into a table which reflected the total participant pool (See Appendix C, for table pertaining to each question). For example, in answer to the best/most rewarding aspects of current duties, there was a category of "Status". Only 2.8% of the total sample identified status as being one of the best or most rewarding parts of their duties and those participants came from the crime squads. As participants often wrote several statements in response to each question, a person could have indicated several aspects of their current duties that were important, e.g., good work colleagues, work challenge etc., and so each identified aspect was assigned to a category. However, each statement regarding a category was counted only once and if several sentences alluded to the same category, i.e., helping victims, they were counted only once. The data were then re-examined by a research assistant (an ex-psychology student now working as a police officer) using the established coding system. Inter-rater agreement for one third of responses was 98.3% with differences resolved by discussion for the remaining 1.7%. The high concordance rate might be due to both raters being familiar with the police environment and the categories being somewhat self-explanatory.

In response to the question concerning the best or most satisfying aspects of current duties, "assisting victims and helping people" was the most popular response, with 48.6% of the total participants considering this one of the best and most rewarding aspects of their current duties. SOCAU members (71.4%) had the highest response in this category followed by Crime Squads (50.0%), Crime Scene Officers (42.9%), "Others" (34.8%) and finally General Duties Police (32.7%). Respondents also indicated that "successfully prosecuting offenders" was important (28.8% of the total sample),

"having good work colleagues" (18.4%), "having challenging work" (13.9%) along with "managing others and passing on knowledge" (10.9%).

As far as the worst or most frustrating aspects of their current duties, the most popular response category (24.5% of the total sample) was "administration issues and lack of resources and/or staff", followed by "management, internal problems and politics" (21.7%). "Distress of victims and job content" tied for third place with "Courts and legal issues" both seemingly equally troubling with 20.3% of participants endorsing those concerns as part of the worst aspects of their duties. It was interesting to observe that only 0.1% indicated that "inadequate reward" was the worst aspects of their duties. SOCAU members, or at least 15.7% of them also indicated that dealing with other government agencies (one in particular) was a frustrating aspect of their duties.

Most participants indicated that they chose to work in the areas they were currently working in because they believed they were suited to the work and therefore had job satisfaction because of this job fit (35.4%). Some did so for functional reasons, i.e., to gain experience (22.2% of total participants), others to help victims (16.5% of total participants) and 15.1% (of the total sample) indicated that their current duties have hours which suited their home life. Of interest was that none of the Crime Squad members chose work to suit their home life and that SOCAU members, despite often enjoying an anecdotal reputation of choosing their work to fit in with home life were not the highest scorers endorsing this category. "Others" were the highest scorers (24.1%), followed by General Duties (18.4%) then SOCAU (17.1%) and finally Crime Scene Officers (9.5%). Another interesting observation was that 18.4 % (of the total sample minus General Duties members) chose their current area to avoid general duties work. This was

particularly so for Crime Scene Officers (38.1%), followed by SOCAU members (14.3%) then "Others" (13.8%). Perhaps this indicates something inherent in general duties work that is frustrating or otherwise undesirable?

Most striking about these results was that a large proportion of the sample did indicate that "assisting victims and helping people" was the most satisfying and rewarding part of their duties. Thus these participants do indeed believe they are helping people and such a belief could indeed be a preventative factor in developing STSD if Figley's (1995a) speculation is correct. This is supported, in that "victim distress and job content" was not the most pressing concern when reporting the worst and most frustrating aspects of their duties. Job satisfaction was further evident in this sample, with a substantial amount of respondents indicating that they chose to work in their current positions due to feeling that their personalities suited the role.

Chapter 9 Discussion

9.1 Overview

The current project aimed to discover if secondary trauma could be found in Victoria Police members and particularly in police officers working in SOCAU units. A further aim was to examine the prevalence of STS in Victoria Police members in comparison to other populations. In addition the current study examined the proposed vulnerabilities to STS, as identified in the literature, to see if and to what extent they were associated with increased STS symptoms in a police population. In particular, given the proposition that an individual's prior history of trauma is an important contributor to the development of STS (e.g., Figley 1995a, 1995b), the current study also examined if prevalence of Prior Trauma (in particular, Childhood Trauma) in police officers was different from what could be expected in comparison to other community groups. The latter aim was essential in light of research suggesting that individuals with a prior history of trauma might be attracted to trauma work (e.g., Van der Kolk & McFarlane, 1996; Paton et al., 1999).

As the literature suggests some overlap between the concepts of STS and burnout, in particular the Emotional Exhaustion component of burnout (e.g. Deighton et al. 2007; Perron & Hiltz, 2006), a crucial aim of the current project was to examine if STS (as measured by the STSS; Bride et al. 2004) was sufficiently distinct from the measure of burnout, especially the Emotional Exhaustion component. Finally, this project sought to give a voice to participants, to allow them to nominate what they considered the most stressful parts of their jobs, the best part of their jobs and to see why they chose to work

in particular areas of the police force. It was hoped that such unencumbered responses would enable some elaboration to the theory about the development of STS.

9.2 Research Question 1: Prevalence

Overall the police participants in the current study had lower scores on Emotional Exhaustion compared to norms (including police) and much lower scores on PTSD when compared to Australian Vietnam veterans. They reported slightly higher scores on measures of Current Distress than Australian general community norms though less distress than persons living in general rural Australian communities. The prevalence of STSD within the current sample (using the criteria of Bride, 2007) amounted to 13% of participants, which is less than in his sample of social workers (15.2%). However, the scores on all the aforementioned measures were positively skewed, indicating that the majority of participants exhibited low levels of symptoms.

It should be noted however, that prevalence of STSD was calculated as per the method used in Bride's (2007) study of social workers, whereby a stress symptom bothering the participant was considered to be essentially a pathological symptom (a symptom of STSD) if experienced "occasionally", "often" or "very often". This method seems somewhat problematic as an individual could have indicated that all symptoms were experienced occasionally and yet another could have reported experiencing them very often, potentially failing to distinguish between sub-clinical and clinical levels of felt symptoms.

9.3 Research Question 2: Correlates of STS

It should be noted that in view of the results of the initial correlations (described below), it was not feasible to test Figley's (1995a) model of STS development, as important predictor variables showed no association with STS at all. The current study explored if the proposed theoretical vulnerabilities in the development of STS actually predict STS. Those vulnerabilities being, Empathy, Prior Trauma, Professional Experience, Age, Having Children and Child Victims, Sexual Abuse Trauma, Caseload (Caseload type and Workload hours), Gender, Stress and Coping, Personality, Social Support and Job Satisfaction variables. Initial correlations indicated that Sexual Abuse Trauma, Caseload, Age, Prior Trauma (generally), and Professional Experience were not associated with STS whatsoever. In addition, Gender, Having Children and having experienced Childhood Trauma oneself were not significantly associated with the presence of STS.

The current findings contrast with the literature proposing them as antecedents to STS, (e.g., Arvay, 2001; Beaton & Murphy, 1995; Cunningham, 2003; Chrestman, 1999; Figley, 1995a; Kassam-Adams, 1999; Lerias & Byrne, 2003; Marmar et al., 1996; Myers, 1996; Pearlman & Mac Ian, 1995; Trippany et al., 2004). However, not all studies found that these "predictor" variables were associated with STS, and the current study's results are in line with evidence against their association being found in Creamer (2002, cited in Baird & Kracen, 2006), Follette et al. (1994), Fama (2003) and Wright (2005) for Prior Trauma, Nelson-Gardell and Harris (2003) and Van Minnen and Keijsers (2000) for Caseload (including trauma vs. non-trauma caseload), and Adams et al. (2001) for Gender.

During the initial correlational analysis, the only facet of Empathy significantly associated with increased STS was 'Personal Distress'. Personal Distress is considered to be an immature form of empathy, a more self-centred reaction to a person (Davis, 1994) rather than the more mature 'Empathic Concern', related to feeling compassion for another. Whilst this finding was consistent with Marmaras (2001) who found that Personal Distress helped predict higher levels of vicarious trauma, and the results of Walton (1997) and Moosman (2002), who both found that Personal Distress was associated with PTSD symptoms in trauma therapists, it is inconsistent with the main theory of STS, which posits that Empathy, in particular Empathic Concern, is the crucial mechanism by which STS develops (Figley, 1995a, 1995b; McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995a; Sexton, 1999). The current results in finding no association between Empathic Concern and STS are consistent with previous research (eg., Marmaras, 2001; Moosman, 2002; Walton, 1997, Wright, 2005).

However, not only does Figley posit that empathy is crucial in the genesis of secondary trauma, he argues that STS occurs the most in therapists who care the most and are most effective, by virtue of their greater levels of Empathic Concern for clients (Figley, 1995a). In contrast to Figley's position, Walton (1997) speculated that higher levels of Empathic Concern might be protective by enabling appropriate emotional boundaries to exist between the helper and the traumatised. The results of the current study taken together with the results of previous research considering Empathy would suggest that it may be therapists or in this case police officers with less developed empathy styles who are most at risk of experiencing symptoms of secondary trauma. Nonetheless, in the current study, despite initially correlating with STS, Personal Distress

failed to remain a significant predictor of STS when placed in a multiple regression equation.

However, initial correlations indicated that higher Emotional Stability scores were associated with lower scores on the STSS. This result is consistent with PTSD research which indicates that Neuroticism (ostensibly the opposite of Emotional Stability) is associated with higher PTSD scores (Breslau et al., 2002; Hodgins et al., 2001; McFarlane, 1989; McNally, 2003). In addition, increased levels of Social Support of all types (Supervisor, Peer and Non-work) were also significantly associated with lower levels of STS in the current study. Such findings are compatible with previous research indicating that Social Support is associated with fewer reported symptoms of STS (e.g., Arvay, 2001; Ortlepp & Friedman, 2002).

Coping was also associated with STS, more specifically the five coping variables: Vent, Denial, Behavioural Disengagement, Mental Disengagement and Alcohol Use (often considered to be the more negative or maladaptive forms of coping) were associated with greater STSS scores. Such associations are congruent with previous findings regarding PTSD and coping styles (e.g., Follette et al., 1994; Hallet, 1996; North et al., 2002). Follette et al. (1994) found PTSD symptoms (used to indicate secondary trauma) were associated with increased use of alcohol and coping which involved withdrawing or trying to forget difficult material. They suggested that an education program about preventative and positive coping strategies might be of use in helping police to avoid symptoms of PTSD and secondary trauma. They also suggested that personal therapy could be useful in order to manage work stress and personal issues. However, they also recognised that often there is somewhat of a stigma attached to the

idea of counselling within police populations. Similarly, whilst North et al. (2002) found that the second most popular coping method amongst their population of fire-fighters was Alcohol Use, they also found that the fire-fighters were averse to counselling interventions, believing that it might reflect badly upon their employment prospects. Nevertheless, what was interesting about the fire-fighters in North et al.'s study was that despite being involved in recovery of human remains (including children) after the Oklahoma City bombing, they did not evidence elevated rates of PTSD or psychological impairment. One reason for this could have been their high levels of Job Satisfaction. Despite the difficulties of their work, they were nevertheless performing a job they were trained to do (North et al., 2002).

Job Characteristic variables, including Job Importance, Job Performance, Job Satisfaction and Turnover Intent were all moderately related to symptoms of STS. That is police officers who considered their work had a low level of importance, reported a low level of performance, experienced less satisfaction with being a police officer and would be likely to leave if another job was available tended to report more symptoms of STS than their more satisfied, higher performing colleagues who felt their job was both important and worth keeping. Such findings are consistent with Figley's (1995a) and Stamm's (2002) contention that a sense of achievement and sense of making a difference to others ameliorates STS symptoms. However, it is worth noting that variables such as Social Support and Job Satisfaction are not trauma specific and have also been implicated in mediating the effects of burnout and work stress (eg., Adams et al., 2001; Cotton & Tuttle, 1986; Houkes et al., 2003; Jayaratne & Chess, 1984; Koeske & Kelly, 1995;

Maslach, 1982; Pines & Keinan, 2005; Sargent & Terry, 2000; Thoresen et al., 2003; Wright & Cropanzo, 1998).

9.4 Research Question 3: Police and Prior Trauma

Do police have more Childhood Trauma than other populations? Whilst this study did not include a community control group, other community studies involving measures of Prior Trauma were utilised as a comparison point. However, estimates of the exposure to traumatic events can vary according to the inclusiveness of the stressor criterion (Breslau, 2002). In fact since the DSM-IV (APA, 1994) changes to the definition of a traumatic stressor, (that is introducing a more subjective element and also incorporating the concept of "hearing about" a trauma), rates of exposure to trauma have increased, as have PTSD rates (Breslau, 2002; McNally, 2003). Therefore currently, it has been argued that most persons in the community would have experienced one or more traumatic events as defined by DSM-IV or DSM-IV-R (Breslau, 2002). Thus Buchanan et al.'s (2001) finding that 70.6% of police recruits reported at least one trauma event during their lifetime may not be indicative of an increased amount of trauma exposure in this population when compared to community levels.

In addition to changes in the definition of a trauma within the DSM, individual differences between studies in the definition of childhood trauma can also make prevalence estimates and comparisons difficult. For instance, the disparity (across studies) in the definition of childhood sexual abuse is believed to be the main contributing factor to the wide range (between 3 and 62%) of prevalence estimates for childhood sexual abuse alone (McNally, 2003). Nevertheless, in this study, a total of

30.6% of participants (34.8% of males and 23% of females) indicated that they had suffered childhood abuse (sexual or physical), which is similar to the prevalence of childhood abuse (33.1%) in studies of mental health professionals (eg., Pope & Feldman-Summers, 1992) and similar to the rates of childhood physical abuse (28.4%) in the general population (e.g., Hussey et al., 2006). However, gender differences have also been found in rates of self-reported childhood abuse, with Follette et al. (1994) finding that more police women (40%) than police men (17.1%) reported historical childhood abuse. This is in contrast with the current study which has a larger percentage of males reporting child abuse compared to females (though this percentage difference by gender was non-significant). Nevertheless, the current study's prevalence rates of prior trauma in terms of childhood abuse do not seem abnormally large and do not appear to be different from what could be expected within the general population. Therefore this study can offer no evidence that individuals with trauma histories are more likely to be attracted to work involving trauma (such as police work) as the prevalence of childhood trauma seems no different to community childhood trauma rates.

9.5 Hypothesis 1:Work Location Differences

Do SOCAU police officers evidence more STS than other police officers? The current study examined whether work location impacted on reported symptoms of STS. The research indicates that dealing with sexual abuse trauma (e.g., Schauben & Frazier, 1995) and children's trauma (e.g., Beaton & Murphy, 1995) puts an individual at increased risk of developing STS symptoms. In addition, being female has been found to be associated with greater reported STS symptoms (Kassam-Adams, 1999), and an

increased likelihood of experiencing PTSD symptoms (e.g., Hodgins et al., 2001). Police officers working in Sexual Abuse and Child Abuse Units (SOCAU) are primarily dealing with both sexual abuse/crimes and child abuse/crimes and there are a greater number of females compared to males working in SOCAU compared other areas of the police force (e.g., general duties). Accordingly SOCAU participants in this study should have reported more symptoms of STS when compared to other participants working in other areas of the force.

The current results indicated that overall, there were no differences in reported symptoms of Current Distress, STS or Emotional Exhaustion based on gender. However, as expected, there were significant, strong differences between work location in terms of time spent with victims of sexual assault and with child victims, both in terms of hours and in terms of workload (i.e., number of briefs or files). SOCAU tended to deal with more sexual assault of both children and adults and more child trauma in general when compared to all the other work locations (General duties, Crime Squads, and others). However, despite these differences in type of work and workload, SOCAU participants demonstrated no statistically significant differences in scores of Current Distress, STS and Emotional Exhaustion when compared to all other work locations, exhibiting very similar mean scores compared to general duties and other police.

In fact the only work location to exhibit marked and significantly different scores on Current Distress, STS and Emotional Exhaustion compared to all other work locations, were Crime Squad members. Though rather than being increased scores, this group demonstrated significantly reduced scores compared to police in other work locations. This group of participants were comprised of detectives from both the

homicide squad and sexual crime squad. Whilst these groups did not have as large a workload as SOCAU officers, the crimes that they investigate are replete with trauma. Interestingly, participants within this group (27.3% of them) were also the only work location that mentioned status (e.g., investigation of the "highest" or "ultimate" crime) as one of the best aspects of their current duties in the qualitative section of the questionnaire. This unexpected finding seems to support the notion that above all, deriving meaning from one's work or predicament might be more important in predicting distress, STSD or even PTSD than the nature of the work or event itself (Frankl, 1984; Pines & Keinan, 2007).

However, these results contrast with the literature which considers that working with child abuse or sexual abuse trauma carries a high risk of developing STS (e.g., Beaton & Murphy, 1995; Cunningham, 2003; Hallet, 1996; Schauben & Frazier, 1995). An argument could consider that taking a rape statement or working on a brief of evidence would not require as much empathy and involvement as working therapeutically with a sexually abused client, thus reducing the mechanism by which STS develops. However as Empathy, in particular Empathic Concern seems to have no empirically demonstrated relationship to STS even in studies involving therapists (e.g., Marmaras, 2001; Moosman, 2002; Walton, 1997; Wright, 2005), such a position seems untenable.

9.6 Research Question 4: Distinction between STS, burnout and PTSD

STS should be highly convergent with the measure of PTSD and the measures of STS and burnout should be measuring conceptually distinct constructs. There was evidence for convergent validity, with the total score on the Impact of Event Scale -

Revised (IES-R; Weiss & Marmar, 1997) correlating strongly with total STS score. This result was expected as the STSS is designed to measure the same sort of PTSD symptomatology as the IES-R (Figley, 1995a; with the exception that those symptoms are experienced vicariously). However, there was insufficient discriminant validity with the measure of Emotional Exhaustion (a subscale within the Maslach Burnout Inventory; Maslach & Jackson, 1986) with the total STSS score and Emotional Exhaustion correlating strongly. This result was unexpected and suggests strong convergence between the two measures. The strong convergence is in contrast with Figley's (1995a) position that burnout and secondary trauma are theoretically distinct constructs and also at odds with literature that advocates for sufficient divergence between burnout and measures of secondary trauma (e.g., Arvay, 2001; Figley, 1995a, 1995b; Jenkins & Baird, 2002; Kassam-Adams, 1999; Pearlman & Mac Ian, 1995; Schauben & Frazier, 1995).

However, whilst Kassam-Adams (1999) found support for the construct of STS being distinct from burnout, she did not use the STSS; rather she used a measure of PTSD, the IES-R (Weiss & Marmar, 1997) as an indicator of STS symptoms. Even in the current study, the correlation between the IES-R and Emotional Exhaustion is considerably lower than the one between the STSS and Emotional Exhaustion. This would seem to indicate that the measure of PTSD and the measure of STSS, are not necessarily measuring exactly the same construct within the current study, despite their high correlation. However, the current study's finding that the Emotional Exhaustion scale and the measure of secondary trauma were strongly correlated is consistent with other studies (e.g., Adams et al., 2001; Deighton et al., 2007; Perron & Hiltz 2006; Pickett, 1999; Wright, 2005) and suggests that the measure of secondary trauma assesses

more than just trauma symptomatology. In addition to the high correlation between the measures of Emotional Exhaustion and STS in this study, examination of the predictors of both Emotional Exhaustion and STS (discussed in the next section) also pointed to a strong overlap between the two constructs.

9.6.1 Actual Predictors of STS in the Current Study. The variables that did correlate with STS in this study were examined using multiple regression analysis. The results indicated that five variables were responsible for 51% of the variance in STS scores, those variables in order of importance being, Alcohol Use, Emotional Stability Total Social Support (negative relationship), Denial, and Turnover Intent. When Emotional Exhaustion was then added to the regression it contributed to a further 7% in variance of STS scores and became the most important predictor of STS. These results seemed to strengthen the possibility that Emotional Exhaustion and STS were measuring the same phenomenon in this study.

In order to further investigate this possibility, the five variables (mentioned above) were used in multiple regression analysis to predict Emotional Exhaustion. Remarkably, the same five variables were responsible for 51% of the variance in Emotional Exhaustion scores. Whilst there were slight differences in order of importance, Total Social Support (negative relationship), Emotional Stability (lack of), Alcohol Use, Turnover Intent and Denial, the magnitude of each variable's contribution did not appear to be that dissimilar. When STS was added to the regression it contributed a further 7% in the variance of Emotional Exhaustion. Therefore in the current study, there is strong convergence between the measure of secondary trauma (the STSS) and the measure of Emotional Exhaustion (an important component of burnout), that is, the two

measures are assessing the same construct. Furthermore the predictors themselves are not trauma specific, and have been studied extensively in the burnout literature. This finding is in line with previous research showing strong overlap between STS and burnout (Adams et al., 2001; Deighton et al., 2007; Perron & Hiltz, 2006; Pickett, 1999; Wright, 2005) and would seem to add weight to the contention that the STSS is in fact measuring a type of burnout (Pickett, 1999; Wright, 2005) rather than being trauma specific as initially conceptualised (Figley, 1995a). Whilst Figley (2002) and Adams et al. (2006) have now acknowledged "a job burnout overlap" between measures of STS and burnout in the emerging secondary trauma literature, the results of the current study move beyond overlap, indicating that at least as far as the STSS is concerned, it is measuring the Emotional Exhaustion levels of the current police participants.

9.7 Qualitative Responses

Qualitative research was concurrently undertaken by way of three open ended questions within the questionnaire and this revealed some points of interest which could go some way to further explaining the results of the current study. Overall, the participants in this study indicated that they found that assisting victims and helping people mattered most to them and was the best part of their job. This was particularly so for members working in SOCAU. In fact, assisting victims and helping people was more important than other positives such as prosecuting offenders, having good work colleagues and having challenging work. Such responses seem to indicate that the officers are gaining satisfaction and validation from their job and that what they are doing does help others in some way. If Figley (1995a) and Stamm (2002) are correct in

believing that a sense of satisfaction at work can prevent the onset of STSD, this could be why the majority of participants in this study are not evidencing high levels of STS or Emotional Exhaustion symptoms. Certainly job satisfaction is associated with lower levels of burnout both in the literature (e.g., Cranny et al., 1992; Pines & Keinan, 2005) and within the present study. Feeling that one has helped others gives meaning to work, even stressful difficult work, and can be a protective factor against stress and burnout in general (Pines & Keinan, 2005).

When asked to nominate the worst aspects of their current duties, the police participants did not list victim stress or job content (traumatic or otherwise) as their most pressing concern. In fact the most common complaint related to administration issues, citing a lack of resources (including a lack of staff), closely followed by grievances about management and concerns about internal politics. Only after nominating the aforementioned issues was victim stress then considered as a problematic matter on an equal par with concerns over sentencing and legal matters. Accordingly the current findings do not indicate that victim stress (a necessary component for secondary trauma to develop) was a major concern of participants. These findings support the work of Hart et al., (1993, 1994, 1995), a series of studies involving Victoria Police officers, which found that organisational stressors (e.g., "Lack of equipment") were more important than operational stressors (e.g., "Dealing with abused children") in determining well being of officers. In fact, Hart et al. (1993) found that when compared to population norms, police officers also reported more favourable levels of well-being. Hart et al. (1994, 1995) interpreted such results as challenging the oft quoted stereotypical view that police

operational work is inherently stressful and accounts for the majority of the stress and distress of officers.

The most common reason given by the current participants for choosing to work in their work location (e.g. SOCAU, general duties) was because they felt they were personally suited to the work, which some indicated aided job satisfaction. This makes sense, since within the organisational psychology literature, good job fit is often associated with higher levels of job satisfaction (Dawis, 1992). This was closely followed by functional reasons such as gaining experience (e.g., for promotional purposes). A less common reason for choosing a particular work area was to help victims (this may be because most work areas within the police force could be seen as helping victims, rather than being specific to a particular work location). A surprising result in this study was that 18.4% of the sample (minus general duties) chose their area of work to avoid general duties work (though without any explanation why). This is perhaps suggestive that there is something inherent in general duties work that is undesirable. There was no evidence arising from the qualitative data that suggests officers are attracted to or desire traumatic work, nor that traumatic work was of itself (or vicariously) the most distressing concern that they have about their work. Participants also did not indicate that job content (traumatic or otherwise) was their greatest concern or the worst aspect of their duties.

9.8 Implications of Findings

The current results could reflect difficulties with the conceptualisation or definition of secondary trauma itself or simply indicate that the way it was measured in

this study is not working within this particular population cohort. These findings are by no means definitive in their exploration of the phenomenon of secondary trauma, nor do they suggest that working with trauma victims does not cause distress to some individuals. However the risk of harm resulting from working with traumatised individuals appears to be somewhat overstated for a police population if we take the results of the current study in combination with other studies concerning secondary trauma or well-being in general (e.g., Follette et al., 1994; Hart & Cotton, 2003; Hart et al., 1993, 1994, 1995).

The current study used the STSS based on the advice of Figley (personal communication, 1st August, 2005) and Bride (personal communication, 1st August, 2005), though there are a number of measures of secondary trauma, for example, the Compassion Fatigue Self-Test (CFST; Figley, 1995a), the Professional Quality of Life Scale: Compassion Fatigue Revised (ProQOL – CSF-R-III ; Stamm, 2005) now with version IV, the Compassion Fatigue Scale-Revised (Gentry et al., 2002) as well as the STSS (Bride, et al., 2004). Figley (personal communication, 1st August, 2005) indicated that any of the measures could be used with confidence in the findings. However, other studies have used the Impact of Event Scale-Revised (e.g., Kassam-Adams, 1999) to examine secondary trauma.

In summary, the current results indicate that the majority of police participants do not report that victim stress or job content is a major concern for them, instead prioritising organisational concerns (e.g. lack of resources or grievances about management or politics) over operational concerns (e.g. distress of victims). In addition they did not evidence high levels of childhood trauma compared to therapists and

community cohorts. Theoretical predictors of secondary trauma did not in fact predict STS, and major construct validity issues existed with the measure of secondary trauma as used in the current study. So much so that it would appear to be measuring Emotional Exhaustion (a component of burnout) rather than trauma specific variables. Predictors of STS and Emotional Exhaustion in this study were; Alcohol use, Emotional Stability (negative relationship), Total Social Support (negative relationship), Denial, and Turnover Intent. Nevertheless, do these results reflect problems with the measurement of STS in this study or with the construct of STS itself, which Figley (1995a) contends essentially mirrors PTSD?

9.8.1 STSD, a variant of PTSD or burnout? If secondary traumatic stress (STS) and the attendant disorder (STSD) are directly comparable and derived theoretically from the concept of post traumatic stress and PTSD (with the exception of being vicariously exposed from re-telling of the trauma compared to being a direct witness) as suggested by Figley (1995a), then presumably they would have similar theoretical antecedents and contributing factors. However, this does not appear to be the case. The PTSD literature does not seem to indicate that greater levels of Empathic Concern are a crucial mechanism by which it develops. This is a point of contrast between the theoretical underpinnings of PTSD and STSD, the latter in theory at least, requires empathy in order to develop. In the current study the predictors of PTSD in order of importance were the Stressful Event, Social Support and Denial (explaining 50.9% of the variance of PTSD), with the Stressful Event having an effect of considerable magnitude. Interestingly, adding STS contributed a further explanation of 12% of the variance in PTSD, and the addition of Emotional Exhaustion after STS contributed no further significant change.

This would make sense if burnout contributes to the experience of PTSD and STS is in fact already representing the construct of burnout (or at least the Emotional Exhaustion component). Furthermore, in this study STS is not highly correlated with the specific Stressful Event associated with the measure of PTSD. This is surprising, if STSD is like PTSD, the measure of STS should be highly correlated with the Stressful Event rather than being the general response or weariness to a person's work with victims. The latter position would seem to associate the condition more with burnout and in particular to Emotional Exhaustion than to an acute state brought on by a specific trauma event experienced by a person with whom one has contact with at work.

This could partially explain why the measure of STS is correlating so strongly with Emotional Exhaustion in this study. Within the measure of STS, participants are requested to rate whether statements are applicable to them as "impacted by their work with victims". Such a requirement implies work in general rather than a specific event or incident. This is in contrast to the measure of PTSD, which initially requires the participant to recall and write down recollections about a specific traumatic event (Weiss & Marmar, 1997) before considering whether statements concerning that event relate to them. In the current questionnaire, the placement of the IES-R after the measure of STSD would also have lessened the association of STS and the specific traumatic event (even though a specific event was not required by the STSD). This might be an important factor when one considers that the symptoms of PTSD are not necessarily the sole domain of PTSD and can be characteristic features of other psychiatric disorders (Breslau, 2002). It has been argued that it is the connection with a specific event that actually renders PTSD symptoms a syndrome (Breslau, 2002). Thus if STSD is modeled

after PTSD, then its appearance after cumulative exposure to clients or in this case victims, could suggest that it does not in fact resemble PTSD and it may indeed be more appropriate to consider that it is a form of burnout, arising partially from increasing exposure to victims of trauma.

The current study's findings of an intersection between burnout and STS are not incongruent with Figley's (1983) original conceptualisation of secondary trauma as a form of "family burnout" (p. 44) in its application to families of traumatised persons. Certainly he has considered STS to potentially be a sub-type of burnout (Bride, 2005, personal communication, 1st August, 2005) and when considering the development of STS in police, he suggested that prolonged exposure to duty related stressors of all sorts will lead to STS (Figley, 1999b), which again appears to be more consistent with the development of burnout than PTSD. Notwithstanding, the incidence of prior traumatic events is thought to be a risk factor for the development of PTSD in response to a traumatic event (e.g., Hodgins et al., 2001; Kessler et al., 1999; McNally, 2003).

However, Figley has argued that STS is theoretically distinct from burnout because it may emerge suddenly and without warning (like PTSD), with symptoms that often seem disconnected from real causes (Figley, 1995a; Figley 1995b) as opposed to burnout, which emerges gradually due to long term emotionally demanding work with troubled people. In contrast, PTSD occurs in the context of a particular traumatic incident (Breslau, 2002) and would probably not be diagnosed if the symptoms were "disconnected" from real causes. Thus the concept of STS appears somewhat malleable and indistinct, which may be contributing to construct validity issues in its measurement. A construct that can either develop suddenly from a singular exposure to a client's

traumatic recollection, yet can also develop from a series of cumulative and vicariously experienced exposure to traumatic events with disconnection from the real causes is a very hard thing to pinpoint.

9.8.2 STSD a normal reaction? In 1995, Figley seemed to favour the term of STSD when talking about the secondary traumatisation phenomenon, considering this to be a more precise and accurate description of the occurrence. However, he considered that "compassion fatigue" could be an appropriate substitute, and in more recent articles which he has authored (e.g., Figley, 2002) or contributed to (e.g., Adams et al., 2006) he again uses the term compassion fatigue. He suggests that the term compassion fatigue implies a normative reaction as opposed to the stigma of underlying pathology. The term "compassion fatigue" does seem at least on the face of it to reduce the association with a disorder or syndrome consisting of specific symptoms. Though semantically, such a term appears to be more conducive to describing Emotional Exhaustion than a sudden reaction to trauma. However, if Secondary Traumatic Stress Disorder (or compassion fatigue) is like PTSD, then perhaps it should not be considered a "normative" reaction.

Whilst the idea that trauma of itself causes PTSD certainly assists in removing the stigma from victims, such a view is problematic if one considers that the majority of persons do not develop PTSD symptoms after traumatic events (McNally, 2003). PTSD only develops in a minority of persons exposed to a traumatic event; otherwise if the event were a causative factor in PTSD development then most persons would become symptomatic irrespective of possessing personal protective factors (McNally, 2003). This was certainly the case for World War II combat soldiers who endured 60 days of continuous fighting, resulting in 98% of them having a psychiatric breakdown

(Grossman, 1995). Such unrelenting exposure to danger is thought to have the capacity to overwhelm even the most resilient person (Grossman, 1995), thus clearly the event was fundamental in the development of stress symptoms. However, most PTSD research includes events which are not so catastrophically implicated in symptom development, with the majority of respondents not reporting clinically elevated symptomatology. For example, in a study of residents after the terrorist attacks on the World Trade Centre in 2001, 7.5% of a random sample of Manhattan residents and 20% of those closer to World Trade Centre reported clinically significant levels of PTSD symptoms (5-8 weeks after event). However in February 2002, only 1.7 % of New Yorkers still evidenced PTSD symptoms due to the attacks (Galea et al., 2002), suggestive that the earlier results reflected a temporary reaction and also demonstrating that the greater majority of similarly exposed persons do not develop PTSD. The results of that study add weight to the contention that PTSD is not an inevitable and normal consequence of enduring a traumatic event. Notwithstanding these findings, some events do seem to have more of a contribution than others to the development of PTSD. For example, interpersonal traumatic events (e.g., rape) were found to result in higher rates of PTSD symptoms (55%) compared to other traumas e.g. accident victims (7.5%), and only 2% of those who learned about a trauma developed PTSD (Yehuda, 2002).

So if all traumatic events are not equal in their impact upon symptoms, how do we then compare learning about traumas (indirectly) in the context of an occupation with other traumatic events (e.g., being held at gunpoint)? One way is to consider the subjective appraisal of the traumatic event by the individual. When applied to PTSD, subjective measures of distress or perceived threat have indeed been better predictors of

symptoms than objective measures (McNally, 2003). However, if PTSD develops after events which would not be objectively classed as catastrophic, then personal vulnerability factors would be more likely to be implicated as the cause rather than the event itself (McNally, 2003). McNally gives the example of persons who developed PTSD symptoms after watching The Exorcist. The event is not objectively catastrophic for the individual and the majority of persons do not develop PTSD symptoms after watching it, however they clearly subjectively appraised it as traumatic. Thus when considering STSD, the event might not be objectively catastrophic for the individual hearing about it, but would need to be subjectively appraised as traumatic on a personal level. This implies then, given McNally's (2003) logic, that individual vulnerabilities or risk factors are more likely to be responsible for its occurrence than the traumatic event itself.

However, some researchers believe that the current (subjective) criterion for a traumatic event (Criterion A, within the diagnostic criteria for PTSD) is too inclusive. McNally (2003) refers to the incorporation of exposure to a traumatic event through 'second hand' means such as hearing about the trauma from the direct victim rather than actually being the direct victim as "conceptual bracket creep." Southwick and Charney (2004) agree, believing that such a move "dilutes" the diagnosis of PTSD which in turn renders the identification of specific contributing factors difficult if not impossible (McNally, 2003; Southwick & Charney, 2004). Nevertheless there have been three risk factors for PTSD that have consistently been identified within the literature, being a) pre-existing psychiatric disorders, b) a family history of psychiatric disorders and c) childhood trauma (Breslau, 2002). In addition, other well-known factors also associated with PTSD development have included Neuroticism (Hodgins et al., 2001; Marmar et al.,

1996; McFarlane, 1989; Schnurr & Vielhauer, 1999) and lower intelligence (Breslau, 2002, Breslau, Lucia, & Alvarado, 2006; McNally, 2003).

The current study did not investigate pre-existing psychiatric disorders or a family history of psychiatric disorders (these did not appear to be implicated in the STS literature as being associated with STSD, save for the notion that PTSD was contagiously transmitted to family members). Figley (1983; 1995a) argues that levels of PTSD like symptoms are higher in family members of PTSD sufferers and offers this observation as evidence for the transmission effect of trauma. However, research into family members of persons suffering PTSD is not new, with studies existing as far back as 1918 (World War I veterans) through to Vietnam War veterans finding associations (45% to 74%) between familial (parent, aunt, uncle or siblings) psychopathology (e.g. alcoholism, depression and anxiety) with PTSD type disorders (Davidson & Connor, 1999). Thus it might not be PTSD that is associated with increased risk of PTSD in family members due to contagion, but perhaps psychiatric conditions in general or exposure to dysfunction that heightens the risk of PTSD, whether this is due to biological or socialisation factors.

Potential heritability is not a sole concern of PTSD research, with identical twin studies estimating the risk of developing an anxiety disorder (if one twin already has one) to range between 31% and 88% depending on the study (Bourne, 2005). In fact some research has recently suggested that persons with a short form of the seventeenth chromosome (the serotonin transfer gene) are more predisposed to develop anxiety disorders as well as mood disorders, whereas persons with a long form of the gene are to a certain degree more protected (Bourne, 2005). There do not appear to be any studies within the STS literature that examine if levels of STS (or even PTSD) are higher in

family members of persons with PTSD compared to family members of persons with other anxiety disorders or indeed other psychiatric disorders.

Intelligence levels were also not measured in the current study, though again this does not appear to be an identified risk factor within the STSD literature. However, if level of education were considered to be a crude measure of intelligence, there was no significant difference between level of education and STS scores in the present study. The third consistent predictor of PTSD, childhood trauma was examined in this study (as like PTSD, Prior Trauma is considered a risk factor for STSD; Figley, 1995a), and was found not to be associated with STS. On the other hand, Neuroticism was associated with STS and was also a variable that helped predict higher scores of STS when part of a regression equation with four other variables. Whilst this is consistent with findings within the PTSD literature (e.g., Hodgins et al., 2001), Neuroticism is renowned for its association with negative affect states in general (Kendler & Prescott, 2006) and thus is not a trauma specific variable. The reason for such enduring associations with negative states may lie within the definition of Neuroticism as a personality trait reflecting adjustment versus Emotional Stability, indicative of persons prone to psychological distress, unrealistic ideas and maladaptive coping responses (Costa & McCrae, 1985).

Neuroticism has also been strongly associated with burnout and Emotional Exhaustion (D'Alessandro, 2006; Jensen, 2008; Morgan, 2006; Narumoto et al., 2008; Piedmont, 1993; Wylie, 2003). In a meta-analysis of the literature concerning job related attitudes (e.g., Job Satisfaction and Turnover Intentions), negative affect (a concept similar to neuroticism) was found to correlate with burnout (Thoresen et al., 2003). In fact, Piedmont (1993) went so far as to suggest that burnout is better characterised as

representing enduring characteristics of the individual rather than resulting from properties of one's occupation. This view stemmed from the long-term stability of burnout scores in his longitudinal research (once work environment was accounted for). Such a view is interesting in the context of this study, as is Costa and McCrae's (1985) definition of Neuroticism being representative of persons with maladaptive coping responses.

Of the other variables that helped predict higher STS scores in the current study (none of which are trauma specific), two of them are maladaptive coping responses, Alcohol Use and Denial. However, initial correlations indicated that all five of the maladaptive coping responses were associated with higher STS scores. This may suggest that personality is having a substantial impact on the scores of STS in the current study. This may be particularly so if the relationship of social support (another current predictor of STS scores) to neuroticism (within this study) is considered. Whilst social support has often been treated as an external variable in research studies of PTSD and even stress in general (e.g., Adams et al., 2001; Lerias & Byrne, 2003), a recent synthesis of twin studies research suggests that Neuroticism itself exerts a downward pressure on social support as individuals with high levels of Neuroticism often experience more difficult and conflict ridden relationships (Kendler & Prescott, 2006). If this is so, Neuroticism may be exerting a stronger effect on STS than is apparent from the regression. This may be especially so if we consider that the measure of personality in this study was limited to a small measure of the Big-Five personality dimensions, the Ten-Item Personality Inventory (TIPI; developed by Gosling et al., 2003) due to restrictions on size of the questionnaire and the inclusion of personality being exploratory only. It is possible that a

more extensive measure of personality, particularly of Neuroticism would have revealed a much clearer picture of the extent of personality's influence upon STS. Nevertheless despite the strong association with Neuroticism, social support of itself or rather lack of social support has also been found to be an important contributor to Emotional Exhaustion and turnover intentions (e.g., Houkes et al., 2001).

This seems consistent with the current study's findings, given that job turnover intent was the only other variable significantly contributing to STS in the current study and is a variable that has been consistently associated with the concept of job burnout (Piedmont, 1993) and more specifically with the Emotional Exhaustion component of burnout (Guerts et al., 2003; Houkes, et al., 2001; Thoresen et al., 2003) in the organisational psychology literature. In fact Raquepaw and Miller (1989) found that burnout was predictive of therapists' intention to leave their employment and furthermore burnout was more prevalent in psychotherapists working for agencies than in private practice. This would seem to suggest that organisational factors beyond client characteristics are implicated in burnout and turnover intentions of therapists. Could this also be the case with STS? There appears to be no studies investigating whether agency work as compared to private practice is more predictive of STS. Out of the job characteristic variables within this study, Job Turnover is also the most negatively valanced one, which might also be relevant, given the tendency of neuroticism to be associated with negatively valanced terms rather than positive ones (Smith, 1992).

Pines and Keinan (2005) suggest that burnout occurs in professionals when there is a lack of a sense of significance at work and when the goals and expectations that people had upon entering their professions are unable to be fulfilled. Thus a counsellor

whose goal was "to help others" might experience burnout when they find they cannot help their clients. Accordingly their burnout would arise from despair about their perceived inability to fulfill their goals and ideals. The state of burnout as described by Pines and Keinan, appears to be the antithesis of job satisfaction, which would occur if one thought one's contribution was meaningful. Pines and Aronson (1988) similarly observe that burnout occurs in the most idealistic when reality falls short of their lofty expectations. Thus if STS is the same thing as burnout this means that it potentially occurs in those that are the most idealistic, but not necessarily in the most empathic and most effective as suggested by (Figley, 1995a). However, if it were widely believed that STS and STSD occurs in the most effective and empathic workers, this could artificially inflate its prevalence. After all, most persons would like to believe they were effective and empathic (particularly in populations such as counsellors and social workers)!

Social workers have been a group that have received some attention in the study of STS (e.g., Adams et al., 2001, Adams et al., 2006; Bride, 2007; Cunningham, 2003) in particular child protection workers (e.g., Conrad & Kellar-Guenther, 2006; Jankoski, 2002; Myers, 1996; Myers & Cornille 2002). In fact the STSS was developed using a population of social workers (Bride et al., 2004). However, social workers and specifically child protection workers often practice under stressful interpersonal and organisational conditions including role ambiguity, conflict and hostile clients (Jayaratne & Chess, 1984; Mor Barak, Nissly & Levin, 2001). This is particularly so for child protection workers (Jankoski, 2002). Thus a great deal of research on this particular occupational cohort has found a substantial amount of burnout and job turnover, with retention of staff being notoriously difficult (e.g., Savicki & Cooley, 1986). If we take

Pines and Keinan's (2005) notion of how burnout develops, such a finding is not surprising; a desire to help children can quickly be replaced with the reality of child protection work, involving hostile courts, parents and sometimes children, where "helping" can mean separating a child from their parent (not a desirable outcome for the child in spite of abuse occurring). This, taken together with research indicating that this population often has very large and difficult caseloads (Jankoski, 2002), would perhaps go some way to explaining their high levels of both burnout and turnover. It might also be difficult to obtain social support in the workplace if colleagues are turning over rapidly. Perhaps the finding that this population also demonstrates high levels of STS is not remarkable if STS and burnout do indeed represent the same construct.

Overall, there appear to be striking similarities between the construct of STS and burnout within the respective literatures, seemingly more similarities than exist between PTSD and the STS literature. The theoretical antecedents of STS do not match the theoretical antecedents of PTSD with the exception that Prior Trauma increases the risk of symptoms within both constructs. The PTSD literature does not seem to have focused on empathy as being the mechanism by which it develops. Additionally, missing from the STS theory are two of the three consistent (from within the PTSD literature; Breslau, 2002) identified predictors of PTSD, namely pre-existing psychiatric disorders and a family history of psychiatric disorders. Also not considered in Figley's (1995a) theory are personality factors (e.g. Neuroticism) and intelligence level, both of which have been implicated as risk factors for PTSD. Rather, STS, like burnout appears to be able to develop over a period of time due to exposure to troubled and emotionally distraught clients or victims that one works with (albeit traumatised victims). In the current study,

STS was not predicted by the evaluation of the stressful event recalled for symptoms of PTSD. STS in this study, in a similar fashion to burnout (within both this study and within the burnout literature) seems to appear in persons prone to psychological distress, who have limited social support and who use maladaptive coping techniques. Rather than burnout representing a latent variable contributing to the development of STS (Figley, 2002), in this study burnout (the Emotional Exhaustion component) is essentially the same construct as STS despite the two constructs being ideologically distinct (Figley, 1995a; Kassam-Adams, 1999).

9.9 Limitations

9.9.1 Limitations of the Literature. The construct of STS appears to be imprecise in its current definition (being either the result of one incident of helping a trauma victim or the result of accumulative incidents (of interacting with trauma victims), with the symptoms being possibly disconnected from their real source. This renders its measurement necessarily difficult and potentially makes the construct somewhat unfalsifiable. There appear to be no longitudinal studies concerning STS and its development (which may partially account for the difficulties in defining the construct), nor do many studies incorporate control groups. Rather there appears to be implicit acceptance of a) the existence of STS and b) its existence in groups who deal with trauma victims (be they trauma therapists, police or family members). Whilst the concept of STS is intriguing, and seemingly face valid, there appears to be insufficient empirical evidence to support its occurrence despite its intuitive appeal. The literature that does exist has not thus far been able to consistently identify contributing factors to STS, nor has it

established that empathy is the necessary conduit along which PTSD symptoms travel to contagiously infect therapists and others with whom the main victim interacts. Within the literature on STS, there appears to be a preponderance of books, book chapters and descriptive articles (e.g., Figley, 1995a, 1995b, 1999a, 1999b, 2002) compared to actual studies, particularly by the main theorist. In addition, courses now exist which aim to assist organisations in preventing STS based on the thus far limited literature on the construct. Furthermore, if STS and STSD mirror PTSD then why is another measure over and above the psychometrically sound IES-R needed? If STS is the same thing as burnout or incorporates burnout then why is another measure required rather than using the psychometrically sound MBI? There appear to be no clear answers to these questions.

A further apparent oversight by the general STS literature is the lack of consideration given to potential organisational factors that could influence the development of STS. Arvay and Uhlemann's (1996) study found that counsellors were more likely to have higher stress levels and PTSD symptoms when they worked in community agencies rather than in private settings. This would suggest that factors beyond the client's trauma are causing distress. More recent research into the occupational well-being of police officers has challenged the conventional idea that unique operational stressors incumbent to a person's job are their greatest source of stress (Cotton & Hart, 2003). Thus for police, it has been found that dealing with danger and trauma is actually not the biggest contributor to stress (Hart et al., 1994; Hart & Cotton, 2003) and similarly for teachers, dealing with students who misbehave is not the biggest contributor to their identified stress (Hart, 1994). In fact both groups identified

organisational factors (e.g., management issues, co-worker relationships) to be more stressful than their respective job content. Whilst on the face of it counterintuitive, these findings nonetheless provide evidence that organisational factors are important contributors to employee stress. Perhaps similar organisational issues, such as professional recognition and management practices also impact on therapists and social workers' levels of stress and levels of trauma symptomatology (the main research population thus far for STS research). Any future research concerned with the impact of listening to and helping trauma victims would benefit by accounting for organisational factors.

9.9.2 Limitations of this Study. Whilst all members of SOCAU, homicide and sexual crime squad were sent questionnaires and a further general duties sample was randomly selected, this study also included a small number of general duties participants who self-selected their participation in the study. In addition whilst questionnaires were sent to most crime scene offices (within the category of "other"), this sample also self-selected their participation, with only those willing to participate taking questionnaires. Even so, essentially this was also the case for SOCAU and crime squads and those randomly selected, with only those willing to participate returning questionnaires. Therefore, whilst the current response rate was in keeping with other recent research involving Victoria Police members (Poznanski, J., personal communication 6th March, 2006), it nevertheless may not be representative of all members serving in those respective areas. It is possible that those responding found the topic interesting or that those who were the most distressed could not face the prospect of completing a questionnaire concerning trauma. Thus the current study may not be representative of the

reactions of all Victoria police members, nor other Australian or International police members.

Not only could participation in this study be potentially biased in favour of those most likely to be the least distressed, it was also limited by the use of self-report measures, which have previously been criticised on the basis of participants being able to portray themselves in an overly positive light (Lazarus & Folkman, 1984). The current study did not measure, and therefore cannot rule out social desirability as a confounding factor. Also related to the research method is the fact that the current study is not longitudinal, therefore strong conclusions as to the aetiology of STS, burnout or PTSD cannot be made. Nevertheless, the STS literature also appears to be deficient in this regard despite explicit theories concerning the aetiology of STS.

The current study also did not include a control group of persons who had not been dealing with trauma victims to elucidate if STS symptoms are indeed particular to those dealing with trauma victims or if they are present within the general population. It was anticipated that crime scene officers would have provided a control group as their mandate is essentially to provide forensic services for high volume property offences (e.g., fingerprinting, photography at burglary sites) rather than interpersonal trauma. However, as their questionnaires were received, it was clear from some nominated stressful events, that they were also attending and providing forensic services for suicide scenes and other traumatic incidents. Their utility as a control group was thus greatly diminished. In hindsight, perhaps a more useful control group would have been police recruits, who should not have been exposed to trauma either directly or indirectly as a consequence of their workplace. In addition, it was not possible to examine the effects of

officer rank, due to small numbers in many groups. Future research may find this a fruitful avenue to pursue.

Measurement Limitations. The current study only used a small, ten item measure of personality (TIPI; Gosling et al., 2003), and within the Job Characteristic variables only one item to measure each of the four constructs, of Job Satisfaction, Turnover Intent, Job Importance and Job Performance. These constructs were added for exploratory purposes and needed to be concise due to the already sizeable questionnaire. Within the COPE scales (Carver et al., 1989), Alcohol Use was also only represented by one item. It is therefore possible that stronger or at least more precise results could have been obtained with more encompassing measures of these constructs. At the very least the results could have been better or more thoroughly explained with larger measures which would also have provided more accurate information on the reliability of the respective measures.

As previously mentioned (in Chapter 2 and Chapter 3), an error was made during the construction of the current questionnaire battery, which resulted in the STSS inadvertently being made into a four-point Likert scale instead of a five-point one. Nevertheless this error did not change the direction of the measurement (from Never to Very Often). This error resulted in two negative symptom options ("never or rarely") and two positive symptom options ("occasionally and very often") existing in the measurement of STS, with the third positive option of "often" omitted. Given that prevalence estimates of STSD (Bride, 2007) involve counting persons as symptomatic if they circle any of the three positive symptom responses (occasionally, often or very often), this should not have altered the prevalence rates. It would be hard to conceive of

someone who would have rated experiencing a symptom as “often” then choosing a negative as an alternative. They would more likely have chosen “occasionally” or “very often” depending upon the severity of their felt symptom. However, it does make exact comparison of means more difficult to interpret as it cannot be known for certain how many participants this would have affected and whether they would have scored a point up (to very often) or down (to occasionally). This error would not have impacted on correlations with other measures, as it in no way changed the direction or meaning of the scale.

Like the broader STS research, the current study included no quantitative measures of organisational stressors or climate and so cannot assess the significance of potential contributions of such constructs to STS, Emotional Exhaustion or PTSD symptoms. However, the spontaneous unsolicited appearance of such concerns (e.g., management issues and politics) in the qualitative responses does indicate that such concerns were considered a priority for this population over and above concerns about job content even if their precise contribution cannot be ascertained.

Future research on the impact of working with trauma victims would benefit from incorporating measures and indices of organisational stressors and climate.

Cultural Issues. Another potential limitation on the current findings could relate to police cultural issues. It has long been asserted that the police have a distinctive occupational sub-culture, one that is represented by macho or masculine ideals, with a desire for action and excitement, in-group isolation and solidarity, authoritarian conservatism and a suspicion and cynicism of the law and legal procedures (Pogrebin & Poole, 1991; Reiser, 1973; Waddington, 1999). In particular, the police culture is said to

prohibit open displays of emotions and feelings, seeing them as weak or inappropriate to the task at hand, or incongruent with being effective, and in control (Pogrebin & Poole, 1991). It is therefore possible that cultural norms could have influenced the current results, perhaps resulting in officers under reporting symptoms of STS, Emotional Exhaustion or PTSD. However, downplaying overall symptomatology should not have altered the underlying correlations and relationships between variables. The likely impact of cultural influences, according to Pogrebin and Poole (1991), would be a tendency to express their identity in terms of expressing cynicism about legal matters, and frustration about management or interpersonal issues at work. In other words, police may be more inclined to report that organisational issues bother them rather than stressful work events or emotions.

This certainly could have been a factor influencing the qualitative responses which did indeed point to organisational issues being a predominant concern over stressful job content. Waddington (1999) however, argues that 'cultural' factors are often misused in research with police, usually with a condemnatory approach. Further, that a common group trait can be mistaken for being a distinctive characteristic of police when in fact it is not. For example sexism is often found in other groups of workers, as is racism and cynicism, reflecting more of the influence upon police of the wider cultural beliefs within a particular zeitgeist (e.g., patriarchy; Pogrebin & Poole, 1991). Certainly, the predominance of organisational concerns has been identified by other occupational groups (Hart, 1994; Hart & Cotton, 2003) and therefore may not be a distinctive feature of police culture. In fact in one interesting and somewhat counterintuitive study, it was found that social workers would be more likely to be aggressive (counterattack) if

someone acted in an aggressive manner towards them (Trojanowicz, 1971) when compared to police. Thus cultural issues might be somewhat misleading if taken on face value.

9.9.3 Re-evaluation of Figley's (1995a) STS and STSD Hypotheses. The limitations of the present study notwithstanding, the uniformly negative findings do stimulate a critical re-appraisal of Figley's (1995a) core proposition that STSD is like PTSD. For example, the definition of STS does seem to be somewhat nebulous, said to occur because it is a traumatic reaction to specific client presented material mirroring the diagnostic criteria of PTSD (Figley, 1995a) or it can develop suddenly, yet also disconnected from its real source (Figley, 1995a, 1995b), nonetheless it can also result from the cumulative exposure to duty related stressors of all kinds (Figley, 1999b) and has been described as family burnout (Figley, 1983), with some measures of STS (e.g., CFST) incorporating their own burnout measure within a separate subscale.

However, burnout is not one of the three consistent risk factors (Breslau, 2002) associated with PTSD. Even some of the symptoms of PTSD are not necessarily the sole domain of PTSD itself and can be present in other disorders (Breslau, 2002), with the nexus to diagnosing PTSD being the event itself. The measure of STS (the STSS) was not tied to a specific event in this study rather it implored participants to rate statements according to how they were "impacted by their work with victims". This seems to implicitly suggest work with victims in a general sense rather than a specific event. Thus it was perhaps unsurprising (in retrospect) that we found a convergence between STS and Emotional Exhaustion in the current study. There appears to be no suggestion within the main body of research into STS, that other factors found to be associated with PTSD such

as neuroticism, lower intelligence, personal psychiatric history, and family psychiatric history are in any way connected to the development of STSD. Whilst it is to be expected that a construct may develop and be revised over time due to the impact of research and further consideration, its definition cannot absorb antecedents which are opposed to one another, as in whether it develops suddenly or develops gradually over time.

Nevertheless, whilst the current results do not support the construct of STS as conceptualised by Figley (1995a, 1995b), the STS research has contributed to identifying some of the difficulties experienced in work with trauma victims. In addition, the research draws necessary attention to the controversies surrounding the definition of a traumatic event (Criterion A within the DSM-IV classification of PTSD; see McNally, 2003; Southwick & Charney2004), such a definition, being a crucial issue for those within the trauma research field and for those who treat the traumatised. The STS research also highlights the need to differentiate between normal and pathological reactions and symptoms.

9.9.4 Implications of findings for the current population. Given the construct validity issues apparent with the measurement of STS in this study and the potential problems with the construct itself, no meaningful conclusions can be made concerning STS in a police population, save for the conclusion that the risks of overall harm from dealing with traumatised victims seems to be overstated. However, as STS appears to be measuring an essential component (Emotional Exhaustion) of job burnout, it may be helpful to consider the current population in reference to that. The current findings indicated that lower scores of Social Support and Personality (in particular, lower scores

of Emotional Stability) were the most important predictors of Emotional Exhaustion, closely followed by Alcohol Use, Turnover intent (intent to leave the police force) and then coping by using Denial. All together those variables accounted for 51% of the variance in burnout scores. As previously discussed, poor Emotional Stability is typically associated within the literature with lower levels of Social Support (Kendler & Prescott, 2006), poorer coping (e.g., Bolger, 1990; Carver et al., 1989; Costa & McCrae, 1989; Endler & Parker, 1990; Watson & Hubbard, 1996), Job Turnover Intent (Thoresen et al., 2003), and Current Distress (Cotton & Hart, 2003). Thus personality appears to be having a strong effect on the overall results in this study.

However, personality is relatively stable over time (Costa, McCrae & Arenberg, 1980; Heady & Wearing, 1992), so what can police management do in terms of minimising the risk to employees? A commonly suggested solution is to screen out employees with lower scores of Emotional Stability (or high levels of emotionality or neuroticism), however, such a strategy may not be the most effective (Cotton & Hart, 2003). Persons with low levels of Emotional Stability have been found to be randomly distributed within an organisation (e.g., Griffin, Hart & Norris, 1998, as cited in Cotton & Hart, 2003) and the trait has been found to have very little effect on performance outcomes (Barrick & Mount, 1991). Thus, Cotton and Hart (2003) suggest that the most effective way of managing employees with lower levels of Emotional Stability who exhibit ongoing distress is by targeted and structured psychological interventions, though they caution that organisations need to ensure that their provider groups include staff who are adequately qualified (e.g., postgraduate clinical training).

Whilst Follette et al., (1994) suggested that interventions for police could include educational programs designed to increase positive coping strategies, Hart and Cotton (2003) paradoxically found that improving the coping skills of police officers had a negligible impact on both morale and distress whereas improving organisational climate (e.g., interventions targeting improving leadership and managerial practices) improved both morale and reduced levels of distress. Whilst no solid conclusions about organisational climate can be made concerning the present study, issues were raised in the qualitative responses indicating these areas (management issues) to be of concern to police members. In addition, there is still a considerable amount of variance in Emotional Exhaustion scores left unexplained in the current study, and it is likely that organisational environment variables may account for a good proportion of this if one considers the broader burnout literature. Nevertheless, the only recommendations that can be made from the results of the current study, would be to use targeted evidence based individual interventions for individuals who exhibit significant ongoing distress. However, generic trauma debriefing interventions offered immediately after traumatic events would not be recommended given the research that indicates that it is the minority that develop PTSD (Breslau, 2002; McNally, 2003) and also recent studies that also point to such interventions being not only ineffective, but also potentially harmful by contributing to increasing the prevalence of PTSD symptoms (Devilly & Cotton, 2003).

A further implication from the current study is that as far as work locations are concerned, SOCAU does not appear to be a location that is specifically at risk for Emotional Exhaustion, burnout or PTSD when compared to general duties, crime squads or other police work areas. However, those in crime squads appear to possess some

degree of protection from job burnout, which might in part be due to their perception of their position (in crime squads) as having some degree of status within the wider police and potentially general community. The implication that SOCAU is not a particularly 'high risk' area for employees is particularly important in considering crime compensation cases. It may not be appropriate to rely on data obtained concerning "similar" populations when considering the psychological risk to police of dealing with victims (including children), as happened in the State of New South Wales v Seedsman, 2000, when the court decided that the police role was similar to a counselling role.

Whilst an argument could consider the police role in SOCAU to be a combination of criminal investigation and victim support, it is not by extension a counselling role. Additionally, despite evidence before the court concerning a number of personal and workplace interpersonal difficulties experienced by Ms. Seedsman, the court chose to place greater weight on her exposure to crimes committed against children (directly and vicariously) in deciding the relative contribution to her psychological symptoms. Such an emphasis may be indicative of a biased (and seemingly incorrect) presumption that operational stressors exert a stronger influence upon individuals' well being than organisational matters. Such a presumption is theorised to underlie the propensity of some therapists to ignore other potential triggers for a stress claim (e.g., dissatisfaction with a management decision) and instead focus on the operational trauma history of an officer (Hart & Cotton, 2003). Accordingly in legal matters, it may be appropriate to consider the wider impact of workplace interpersonal issues and the possible contribution that these may have on an individual's decision to press for compensation.

9.10 Future Research

A great deal of research into STS has hitherto been applied to counsellors and social workers who deal with trauma (e.g., Adams et al., 2001, Adams et al., 2006; Bride, 2007; Kassam-Adams, 1999). Therefore to some extent it is the study of stress arising from work experiences purported to be peculiar to those occupational groups (working with trauma). The lack of consistent results identifying the contributions to and developmental antecedents to STSD may partially be due to the complex nature of both stress and well-being in the workplace. Whilst Figley (1995a, 1995b, 1999b) acknowledges the contribution of what he terms "compassion satisfaction" in alleviating the impact of stress (STS), its contribution is assessed in a simplistic manner. Hart's (1999) research indicates that positive and negative experiences make independent contributions to level of well-being, and Cotton and Hart (2003) speculate that it is the lack of positive work experiences rather than the presence of negative work experiences that might shape individuals' perception of stress.

Moreover, a major limitation of the current STS research is the lack of consideration given to the wider organisational context in which trauma workers find themselves, despite the indications (e.g., Arvay & Uhlemann, 1996) that counsellors working in community agencies report higher stress levels and PTSD symptoms compared to those in private practice. Similarly, job burnout is also more prevalent in therapists working for organisations compared to those in private practice (e.g., Arvay & Uhlemann, 1996; Raquepaw & Miller, 1989). Perhaps there are common factors operating on an organisational level that give rise to increased stress symptoms and

burnout. Even in the current study, the actual impact of the wider organisational context upon measures of STS, PTSD and Emotional Exhaustion is unknown.

It may therefore be helpful to place any further studies concerning the potential deleterious effects of dealing with trauma victims within the organisational health framework (see Hart & Cotton, 2003). Such a framework can account for the complex interaction between individual and organisational characteristics, including how they relate to occupational stress, and also how these relate to occupational well being (of which stress is only one part). This focus can then assist in examining organisational performance (including taking into account how the complex interplay actually impacts on trauma victims).

9.11 Conclusion

The current study attempted to examine the phenomenon of secondary traumatic stress and to see if this was an issue impacting upon Victoria police officers, in particular to see if it was more of a problem for police officers working in Sexual Offences and Child Abuse Units (SOCAU) than for police working in other areas. Overall the negative impact of working with victims of trauma appears to be overstated in this population as also seems to be the case for counsellors (Wright, 2005; Van Minnen & Keijsers, 2000). Secondary traumatic stress as measured in this study appears to be measuring the Emotional Exhaustion component of job burnout and does not appear to share the characteristics of PTSD as proposed by Figley (1995a, 1995b). Qualitative responses indicated that in this police population, victim stress was not the worst aspect of their job. Rather they indicated that administration issues, a lack of resources (including a lack of

staff) and internal politics, including management issues were more concerning. A re-evaluation of the definition and contributing factors to STS seems to be warranted, given the mounting research suggesting an overlap between burnout and STS. In addition future studies concerned with the impact of working with victims may do well to incorporate organisational factors by placing the research within the organisational health framework.

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Appendix A

Research Questionnaire

Project title: An Exploration of Secondary Trauma Effects Upon Members of the Victoria Police Force

SWINBURNE UNIVERSITY OF TECHNOLOGY

My name is Susan Wheeler; I am a doctoral student with Swinburne University. I was a police officer for 8 years and for the last two of those years I worked at Dandenong Community Policing Squad (now known as Sexual Offences and Child Abuse Unit). As part of my studies, I am conducting research into the impact upon professionals of working with survivors of trauma. I am hoping that my research will shed light onto both the good and not so good aspects of working with this often vulnerable population. Such knowledge may assist in providing optimal support for police officers who deal with traumatized members of the public.

I am inviting you to participate in this research. There are two studies in this project that you can assist with. In Study 1 you will be asked to complete a set of questionnaires along with some demographic information. The questionnaires will contain questions about your current well being and stress levels, your personality characteristics, your own experience of trauma, the way that you experience compassion and understanding of others, available social supports, levels of secondary trauma and stress associated with dealing with victims of traumatic events, and your coping style. These questions can usually be answered simply by circling an appropriate response to each question. More general information such as age, gender, marital status etc. will be sought within the demographic section of the questionnaire. The questionnaire should take approximately 45 minutes to complete. **Your participation in this study is completely voluntary, - you are free not to return the questionnaire.** Participation, refusal or withdrawal from participating in this research will not affect your occupational circumstances, either currently or in the future. Return of the questionnaire will be taken to imply your informed consent to participate in Study 1. If you choose to participate, any information obtained will be completely confidential and anonymity is assured. Results of the study may, upon completion, appear in conference papers or be published in a scientific journal, but only reported as group data and no individual's data will be identifiable.

In Study 2, I am interested in interviewing a small number of people with the aim of further understanding the impact upon you as an individual in dealing with victims of traumatic events. You will NOT be asked to identify any victims. Participation in Study 1 does **not** commit you to participation in Study 2. At the end of this questionnaire (Study 1) you will be asked if you would like to take part in study 2 and if you are interested you can write your contact details in the place provided. If you choose to participate, any information obtained will be completely confidential and de-identified by replacing your details with a code number. Any identifying information you give will not be attached to your data. It will be securely stored separately from the data so you will not be able to be identified by anyone but the student researcher. At the end of the study, all identifying data will be destroyed.

It is possible that some of the questions may be distressing to you if you have experienced considerable anguish when dealing with victims, and you may experience unpleasant or distressing emotions or thoughts related to the earlier trauma. Please remember that you are free to withdraw from the study at any time. You may wish to be referred to a counsellor if you are not already involved in therapy. Police members can contact Victoria Police Clinical Services (9340-5444) to arrange counselling free of charge. Alternatively you could contact the Swinburne Psychology Centre, Swinburne University of Technology (9215 8653) for low cost counselling or access telephone counselling through Lifeline (131114). Other referrals may be obtained by contacting Bruce Findlay on ph. 9214-8093.

Any questions or concerns regarding the project entitled "An Exploration of Secondary Trauma Effects Upon Members of the Victoria Police Force" can be directed to the Senior Investigator, Dr. Bruce Findlay on 9214-8093, or the Principal Investigator, Susan Wheeler on 0423-025-601.

In addition, should you have any complaints or concerns in the manner in which this research has been conducted, please do not hesitate to contact the Victoria Police Research Coordinating Committee:

The Secretary to the Research Coordinating Committee,
Policing Research Unit,
Victoria Police Centre,
637 Flinders Street,
Melbourne 3005.
Tel: (03) 9247 6732
Fax: (03) 9347 6712

OR

The Chair, Human Research Ethics Committee,
C/- Research and Graduate Studies,
PO Box 218,
Swinburne University of Technology, Hawthorn, Victoria 3122.
Tel: (03) 9214 5223

Please consider the purposes and time commitment of this study before deciding whether or not to participate. Retain this information for your own records.

Your participation is very important to the study and is greatly appreciated.

SECTION A: Personal and Work Profile
Please provide the following information about yourself and your work.

1. Please indicate your gender by circling the appropriate response. 1. Male 2. Female

2. What is your age in years? _____

3. Circle the number below that best describes your marital/partnered circumstances at the moment:

1. Single, never in a marital relationship
2. In a relationship but living separately
3. Married
4. Living in a marital type relationship (i.e. de-facto relationship).
5. Divorced or separated
6. Widowed
7. Other (please explain)_____

4. Do you have any children? 1. Yes 2. No (please proceed to question 6.)

5. How many children do you have and what are their ages? _____

6. Please circle the number below that best describes your level of education to date:

1. Completed year 11 or below
2. Completed year 12
3. Completed a certificate or diploma
4. Completed a bachelor degree
5. Completed a post-graduate degree

7. Please circle the number that best describes your employment situation at the current time:

1. Performing general duties work.
2. Performing work in the Traffic Management Unit.
3. Performing duties in the Major Collision Investigation Group.
4. Performing duties in a Sexual Offences and Child Abuse Unit (SOCAU).
5. Performing duties in the crime department as a Homicide Detective.
6. Performing duties in the crime department in the Sexual Crimes Squad.
7. Other duties (please explain)_____

8. How old were you when you joined the Police Force? _____

9. For how long in years, have you been performing duties in the area you are currently working in?
_____

10. What is your current rank? (please circle the appropriate number)

1. Constable
2. Senior Constable
3. Sergeant
4. Senior Sergeant
5. Inspector or above

11. How long (in years) have you been in the police force? _____

12. At the present time, how many files or briefs are you responsible for that involve sexual abuse of children? _____

13. How many files or briefs are you currently responsible for, involving other trauma occurring to children (not sexual abuse) such as being in a traffic accident, witnessing a homicide or being a victim of assault or physical abuse? _____

14. How many hours per week do you estimate that you spend in direct contact (e.g. talking to or taking statements from) child victims of sexual abuse? _____

15. How many hours per week do you estimate that you spend in direct contact (e.g. talking to or taking statements from) child victims of other trauma? _____

16. At the present time, how many files or briefs are you responsible for that involve adults who were sexually abused when they were children? _____

17. How many files or briefs are you currently responsible for that involve sexual assault of adults? _____

18. How many files or briefs are you currently responsible for involving other trauma occurring to adults (e.g. traffic accidents, homicide or serious assaults)? _____

19. How many hours per week do you estimate that you spend in direct contact with adult victims of sexual assault? _____

20. How many hours per week do you estimate that you spend in direct contact with adult victims (or their relatives) relating to other trauma? _____

21. What are the best aspects of your current duties (i.e. most rewarding or satisfying aspects)?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

22. What are the worst aspects of your current duties (i.e. most frustrating or distressing)?

_____
_____
_____

_____
_____
_____
_____
_____
_____
_____
_____
_____

23. Why did you choose to work in the area you are currently employed in?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

24. To what extent do you feel that your work is important and makes a significant contribution to society? (Please circle one response below)

1. Not very important
2. Somewhat important
3. Neither unimportant or important
4. Important
5. Very important

25. Estimate your level of performance at work ranging from 1% (very low performance) to 100% (very high level of performance)._____

26. How satisfied are you with being a police officer? (Circle one response below)

1. Not at all
2. Somewhat satisfied
3. Neither unsatisfied or satisfied
4. Satisfied
5. Very satisfied

27. If another job was available, how likely is it that you would leave the police force?

1. Not at all likely
2. Somewhat likely
3. Undecided
4. Likely
5. Very likely

SECTION B:

The following questions inquire about how you have been feeling over the last 4 weeks. Please circle the numbered response that best describes how you have been feeling.

	None of the time	**A little of the time**	**Some of the time**	**Most of the time**	**All of the time**
1. In the past 4 weeks, about how often did you feel tired for no good reason?	1	2	3	4	5
2. In the past 4 weeks, about how often did you feel nervous?	1	2	3	4	5
3. In the past 4 weeks, about how often did you feel so nervous that nothing could calm you down?	1	2	3	4	5
4. In the past 4 weeks, about how often did you feel hopeless?	1	2	3	4	5
5. In the past 4 weeks, about how often did you feel restless or fidgety?	1	2	3	4	5
6. In the past 4 weeks, about how often did you feel so restless you could not sit still?	1	2	3	4	5
7. In the past 4 weeks, about how often did you feel depressed?	1	2	3	4	5
8. In the past 4 weeks, about how often did you feel that everything was an effort?	1	2	3	4	5
9. In the past 4 weeks, about how often did you feel so sad that nothing could cheer you up?	1	2	3	4	5
10. In the past 4 weeks, about how often did you feel worthless?	1	2	3	4	5

SECTION C:

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which ***you agree or disagree with that statement.*** You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Disagree strongly 1	Disagree moderately 2	Disagree a little 3	Neither agree or disagree 4	Agree a little 5	Agree moderately 6	Agree strongly 7

I see myself as:

1. _____Extraverted, enthusiastic.
2. _____Critical, quarrelsome.
3. _____Dependable, self-disciplined.
4. _____Anxious, easily upset.
5. _____Open to new experiences, complex.
6. _____Reserved, quiet.
7. _____Sympathetic, warm.
8. _____Disorganized, careless.
9. _____Calm, emotionally stable.
10. _____Conventional, uncreative.

SECTION D:

This questionnaire examines how you view your job and the people with whom you work closely. Please read each of the following statements about job-related feelings carefully and decide if you have ever felt this way about your job. If you have never had this feeling, write a "0" (zero) in the space before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

How Often						
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

How Often	Statements
1. _____	I feel emotionally drained from my work.
2. _____	I feel used up at the end of the workday.
3. _____	I feel tired when I get up in the morning and have to face another day on the job.
4. _____	I can really understand how some victims (or their relatives) feel about things.
5. _____	I feel I treat some victims (or their relatives) as if they were impersonal objects.
6. _____	Working with people all day is really a strain for me.
7. _____	I deal very effectively with the problems of some victims (or their relatives).
8. _____	I feel burned out from my work.
9. _____	I feel I'm positively influencing other people's lives through my work.
10. _____	I've become more callous toward people since I took this job.
11. _____	I worry that this job is hardening me emotionally.
12. _____	I feel very energetic.
13. _____	I feel frustrated by my job.
14. _____	I feel I'm working too hard on my job.
15. _____	I don't really care what happens to some victims (or their relatives).
16. _____	Working with people directly puts too much stress on me.
17. _____	I can easily create a relaxed atmosphere with some victims (or relatives) I deal with.
18. _____	I feel exhilarated after working closely with some victims (or their relatives).
19. _____	I have accomplished many worthwhile things in this job.
20. _____	I feel like I'm at the end of my rope.
21. _____	In my work, I deal with emotional problems very calmly.
22. _____	I feel victims (or their relatives) blame me for some of their problems.

SECTION E:
We would like to know which of the following types of events you may have experienced (**NOT IN CONNECTION WITH YOUR PRESENT WORK**)

BEFORE EACH CATEGORY PLEASE WRITE:
Y – to indicate **YES,** to you have experienced such an event,
NS – to indicate **NOT SURE**, you think it is possible that you have, or
N – to indicate **NO**, you have not experienced such an event.
In the space **AFTER** the item, write your **AGE(S)** when the event occurred.

Y, NS or N	**YOUR AGE(S)**
_____1. Experienced war, military or holocaust.	_____
_____2. Experienced a natural or human-induced disaster (e.g. fire).	_____
_____3. Experienced physical or emotional loss of a significant other.	_____
_____4 Exposed to life-threatening illness.	_____
_____5. Experienced life threatening illness.	_____
_____6. Observed domestic violence, neglect, or physical abuse as a child.	_____
_____7. Observed emotional abuse of a significant other.	_____
_____8. Experienced domestic violence, neglect or physical abuse as a child.	_____
_____9. Experienced domestic violence, neglect or physical abuse as an adult.	_____
_____10. Experienced emotional abuse.	_____
_____11. Observed sexual abuse or rape.	_____
_____12. Experienced sexual contact before age 18 with someone in your family who was at least 5 years older.	_____
_____13. Experienced sexual contact before age 18 with someone other than a family member, who was at least 5 years older.	_____
_____14. Observed criminal activity other than rape such as murder, assault, or mugging.	_____
_____15. Experienced criminal activity other than rape.	_____
_____16. Felt responsible for the serious injury or death of another person in a non-war-related situation.	_____
_____17. Heard about physically and/or emotionally abusive or traumatic events or experiences of others you care about.	_____
_____18. Experienced rape or other sexual assault at age 18 or older	_____
_____19. Other trauma (Please specify)_____	_____

SECTION F:

Please indicate whether or not you have **attended and dealt with the following events in the course of your work in the last 6 months** by ticking the box and indicating **approximately how many** of those events you attended in the **last 6 months.** ***If*** you have dealt with the events please also indicate how stressful you found the various tasks by circling the relevant number.

Tasks	Dealt with √	Approx No. of times	Not stressful	Somewhat stressful	Very stressful	Extremely stressful
Victims						
1. Dealing with assault victims			1	2	3	4
2. Domestic violence victims			1	2	3	4
3. Person seriously injured			1	2	3	4
4. Sudden death (i.e. Body)			1	2	3	4
5. Delivering a death message			1	2	3	4
6. Suicide victim			1	2	3	4
7. Cot death			1	2	3	4
8. Dealing with relatives of a homicide victim.			1	2	3	4
9. Missing adult			1	2	3	4
10. Missing child			1	2	3	4
11.Taking an initial rape complaint			1	2	3	4
12. Taking a rape statement			1	2	3	4
13. Dealing with physically abused children.			1	2	3	4
14. Dealing with sexually abused children.			1	2	3	4
Danger to self or other officers						
15. Unarmed offender – violent arrest			1	2	3	4
16. Armed offender – violent arrest			1	2	3	4
17. Called a Code 9 (police in trouble)			1	2	3	4
18. Attended a code 9			1	2	3	4
19. Having to draw firearm (no shots fired)			1	2	3	4
20. Being shot at			1	2	3	4
21. Having to shoot at someone.			1	2	3	4
22. Large scale public event (e.g. demonstration)			1	2	3	4
23. Narrow escape from injury (self).			1	2	3	4
24. Witnessed a colleague being injured			1	2	3	4
25. Witness colleague's death			1	2	3	4
Motor vehicle collisions (code 12)						
26. Traffic accident - one fatality			1	2	3	4
27. Traffic accident – multiple fatality			1	2	3	4
28. Dealing with deceased's relatives			1	2	3	4
29. Child fatality or fatalities			1	2	3	4
30. Colleague as fatality			1	2	3	4
31. Body recovery (from accident or disaster)			1	2	3	4

SECTION G: The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate **how well it describes you** by circling the appropriate number. Read each item carefully before responding. Answer as honestly as you can.

0 ***Does not describe me at all***	**1** ***Slightly describes me***	**2** ***Describes me fairly well***	**3** ***Describes me pretty well***	**4** ***Describes me extremely well***

1.	I often have tender, concerned feelings for people less fortunate than me	0	1	2	3	4
2.	I sometimes find it difficult to see things from the "other guy's" point of view	0	1	2	3	4
3.	Sometimes I don't feel very sorry for other people when they are having problems	0	1	2	3	4
4.	In emergency situations, I feel apprehensive and ill-at-ease	0	1	2	3	4
5.	I try to look at everybody's side of a disagreement before I make a decision	0	1	2	3	4
6.	When I see someone being taken advantage of, I feel kind of protective towards them	0	1	2	3	4
7.	I sometimes feel helpless when I am in the middle of a very emotional situation	0	1	2	3	4
8.	I sometimes try to understand my friends better by imagining how things look from their perspective	0	1	2	3	4
9.	When I see someone get hurt, I tend to remain calm	0	1	2	3	4
10.	Other people's misfortunes do not usually disturb me a great deal	0	1	2	3	4
11.	If I'm sure I'm right about something, I don't waste much time listening to other people's arguments	0	1	2	3	4
12.	Being in a tense emotional situation scares me	0	1	2	3	4
13.	When I see someone being treated unfairly, I sometimes don't feel very much pity for them	0	1	2	3	4
14.	I am usually pretty effective in dealing with emergencies	0	1	2	3	4
15.	I am often quite touched by things that I see happen	0	1	2	3	4
16.	I believe that there are two sides to every question and try to look at them both	0	1	2	3	4
17.	I would describe myself as a pretty soft-hearted person	0	1	2	3	4

0 ***Does not describe me at all***	**1** ***Slightly describes me***	**2** ***Describes me fairly well***	**3** ***Describes me pretty well***	**4** ***Describes me extremely well***

18. I tend to lose control in emergencies	0	1	2	3	4
19. When I'm upset at someone, I usually try to "put myself in his/her shoes" for a while	0	1	2	3	4
20. When I see someone who badly needs help in an emergency, I go to pieces	0	1	2	3	4
21. Before criticizing somebody, I try to imagine how I would feel if I were in their place	0	1	2	3	4
22. I don't get upset just because a friend is acting upset	0	1	2	3	4
23. My friends come to me with their problems because I am a good listener	0	1	2	3	4
24. The people around me have a great influence on my moods	0	1	2	3	4
25. I am the type of person who can say the right thing at the right time	0	1	2	3	4
26. I often find that I can remain cool in spite of the excitement around me.	0	1	2	3	4
27. I become nervous if others around me are nervous	0	1	2	3	4
28. Others think of me as a very empathic person	0	1	2	3	4
29. I tend to lose control when I am bringing bad news to people	0	1	2	3	4
30. I tend to remain calm even though those around me worry	0	1	2	3	4
31. I usually respond appropriately to the feelings and emotions of others	0	1	2	3	4
32. I usually have a knack for saying the right thing to make people feel better when they are upset	0	1	2	3	4
33. I cannot continue to feel OK if people around me are depressed	0	1	2	3	4

SECTION H:

The following questions concern the sorts of support that you may receive from different people.
For each answer below please circle the number that best describes the support that you receive.

1 = very little 2 = a little 3 = some 4 = a lot 5 = a great deal

1. How much do these people go out of their way to do things to make your work life easier for you?

A. Your immediate supervisor	1	2	3	4	5
B. Other people at work	1	2	3	4	5
C. Your spouse, or partner, friends and relatives	1	2	3	4	5

2. How much difficulty do you have talking to each of the following people?

A. Your immediate supervisor	1	2	3	4	5
B. Other people at work	1	2	3	4	5
C. Your spouse, or partner, friends and relatives	1	2	3	4	5

3. How much can each of these people be relied on when things get tough at work?

A. Your immediate supervisor	1	2	3	4	5
B. Other people at work	1	2	3	4	5
C. Your spouse, or partner, friends and relatives	1	2	3	4	5

4. How much is each of the following people willing to listen to your personal problems?

A. Your immediate supervisor	1	2	3	4	5
B. Other people at work	1	2	3	4	5
C. Your spouse, or partner, friends and relatives	1	2	3	4	5

5. How much do the following people give you the emotional support you need?

A. Your immediate supervisor	1	2	3	4	5
B. Other people at work	1	2	3	4	5
C. Your spouse, or partner, friends and relatives	1	2	3	4	5

SECTION I:

This measure looks at the negative effects of work. The following is a list of statements made by persons who have been impacted by their work with victims. Read each statement, and 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.

1 = Never **2 = Rarely** **3 = Occasionally** **4= Very Often**

1	I felt emotionally numb	1	2	3	4
2	My heart started pounding when I thought about my work with victims or their relatives	1	2	3	4
3	It seemed as if I was reliving the trauma(s) experienced by my victim	1	2	3	4
4	I had trouble sleeping	1	2	3	4
5	I felt discouraged about the future	1	2	3	4
6	Reminders of my work with victims upsets me	1	2	3	4
7	I had little interest in being around others	1	2	3	4
8	I felt jumpy	1	2	3	4
9	I was less active than usual	1	2	3	4
10	I thought about my work with victims/and or relatives when I didn't intend to	1	2	3	4
11	I had trouble concentrating	1	2	3	4
12	I avoided people, places or things that reminded me of my work with victims	1	2	3	4
13	I had disturbing dreams about my work with victims or their relatives	1	2	3	4
14	I wanted to avoid working with some victims or their relatives	1	2	3	4
15	I was easily annoyed	1	2	3	4
16	I expected something bad to happen	1	2	3	4
17	I noticed gaps in my memory about time spent with victims or their relatives	1	2	3	4

SECTION J:

1. The following items deal with the ways you coped with a recent investigation or stressful situation involving a crime or accident victim or relative of a victim. This should be an event that you became aware of after it had occurred rather than directly attending at the time of its occurrence. Please take a moment to think of a recent stressful situation involving such an investigation or situation and describe that event briefly below:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

2. What aspect of that situation made it so demanding?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

3. How stressful did you find this event? Please circle a number:

1 2 3 4 5 6 7 8 9

not very **extremely**

SECTION K: Below is a list of difficulties people sometimes have after stressful life events. With respect to the incident you described in **SECTION J**, how much were you distressed or bothered by these difficulties? Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST 30 DAYS.

	Not at all	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**
1. Any reminder brought back feelings about it	0	1	2	3	4
2. I had trouble staying asleep	0	1	2	3	4
3. Other things kept making me think about it	0	1	2	3	4
4. I felt irritable and angry	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
6. I thought about it when I didn't mean to	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real	0	1	2	3	4
8. I stayed away from reminders about it	0	1	2	3	4
9. Pictures about it popped into my mind	0	1	2	3	4
10. I was jumpy and easily startled	0	1	2	3	4
11. I tried not to think about it	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them	0	1	2	3	4
13. My feelings about it were kind of numb	0	1	2	3	4
14. I found myself acting or feeling as though I was back at that time	0	1	2	3	4
15. I had trouble falling asleep	0	1	2	3	4
16. I had waves of strong feelings about it	0	1	2	3	4
17. I tried to remove it from my memory	0	1	2	3	4
18. I had trouble concentrating	0	1	2	3	4
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart	0	1	2	3	4
20. I had dreams about it	0	1	2	3	4
21. I felt watchful or on-guard	0	1	2	3	4
22. I tried not to talk about it	0	1	2	3	4

SECTION L:

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you do and feel when you experience stressful events. Obviously, different events bring out somewhat different responses, but it may help if you think about the stressful experience you identified in **SECTION J** of this questionnaire when completing the following section. Remember there are no right or wrong answers.

Please circle the most appropriate response choices for each item. Treat each item separately from every other item. It is important to indicate what you do as opposed to what "most people" do or what you believe you should do in the circumstances.

	I don't usually do this at all.	**I usually do this a little bit**	**I usually do this a medium amount.**	**I usually do this a lot.**
1. I take additional action to try to get rid of the problem.	1	2	3	4
2. I concentrate my efforts on doing something about it.	1	2	3	4
3. I do what has to be done, one step at a time.	1	2	3	4
4. I take direct action to get around the problem.	1	2	3	4
5. I try to come up with a strategy about what to do.	1	2	3	4
6. I make a plan of action.	1	2	3	4
7. I think hard about what steps to take.	1	2	3	4
8. I think about how I might best handle the problem.	1	2	3	4
9. I ask people who have had similar experiences what they did.	1	2	3	4
10. I try to get advice from someone about what to do.	1	2	3	4
11. I talk to someone to find out more about the situation.	1	2	3	4
12. I talk to someone who could do something concrete about the problem.	1	2	3	4
13. I talk to someone about how I feel.	1	2	3	4
14. I try to get emotional support from friends or relatives.	1	2	3	4
15. I discuss my feelings with someone.	1	2	3	4

	I don't usually do this at all.	**I usually do this a little bit**	**I usually do this a medium amount.**	**I usually do this a lot.**
16. I get sympathy and understanding from someone.	1	2	3	4
17. I get upset and let my emotions out.	1	2	3	4
18. I let my feelings out.	1	2	3	4
19. I feel a lot of emotional distress and I find myself expressing those feelings a lot.	1	2	3	4
20. I get upset and am really aware of it.	1	2	3	4
21. I refuse to believe that it has happened	1	2	3	4
22. I pretend that it hasn't really happened.	1	2	3	4
23. I act as though it hasn't really happened.	1	2	3	4
24. I say to myself "this isn't real".	1	2	3	4
25. I give up the attempt to get what I want.	1	2	3	4
26. I just give up trying to reach my goal.	1	2	3	4
27. I admit to myself that I can't deal with it, and quit trying.	1	2	3	4
28. I reduce the amount of effort I'm putting into solving the problem.	1	2	3	4
29. I turn to work or other substitute activities to take my mind off things.	1	2	3	4
30. I go to the movies or watch TV, to think about it less.	1	2	3	4
31. I daydream about things other than this.	1	2	3	4
32. I sleep more than usual.	1	2	3	4
33. I drink alcohol or take drugs, in order to think about it less.	1	2	3	4

Thank you for taking the time to fill out the questionnaire and take part in Stage 1 of the study, "An Exploration of Secondary Trauma Effects Upon Members of the Victoria Police Force"

We would like to carry out some follow up interviews with some respondents who complete and return this questionnaire.

If you are happy to be contacted by us, please supply your given name and contact details below. Giving your details at this time does not mean you are consenting to participate in Stage 2, nor does it guarantee your participation in Stage 2. If we contact you, you will be given further information to enable you to make an informed decision at that time.

<u>Note:</u> These contact details will be removed from the questionnaire data and securely stored separately to the questionnaire data.

First Name: …….

Phone:…….

Email: …….

Appendix B

Qualitative coding system

SECONDARY TRAUMA STUDY – Sue Wheeler

Coding systems

Question 21 – "Best Aspects of Current Duties"

Blue Highlight of text –	pertaining to text which concerns assisting victims or helping people in some way. Can be emotional support, or bringing them justice.
Red Highlight of text –	pertaining to prosecution, incarceration or identification of a suspect/offender – getting results. (note: crime scene officers more concerned with id of offenders than prosecution)
Yellow Highlight of text –	referring to challenge or complexity within the job, i.e. resolving something or completing (seeing something through from start to finish) something well or to a good standard. E.g., for Socau – can be satisfaction from getting disclosures from a child via VATE (Video and Audiotaped Evidence interview).
Green Highlight –	Management opportunity – pass on knowledge/educate to junior members.
Pink Highlight –	Hours/fit with family life/ good roster
Grey Highlight –	Autonomy – as opposed to close supervision – time/ability to follow jobs "properly" – due to job not being too prescribed. Freedom to organise own work.
Dirty Green –(dark yellow) –	Appreciation or positive feed back from others (public,peers or supervisors/managers).
Teal Highlight –	Variety or diversity within the job content
Purple Highlight –	Status of the job position (inferred from comments such as "Investigating highest crime (ranked) in society" – for homicide).

Brown writing –	Colleagues/ camaraderie - teamwork
Violet writing –	Miscellaneous items – e.g. "getting stuck into barristers and solicitors" or "interesting job with exposure to things not necessarily experienced by the general public….."

Question 22 – "Worst/most frustrating or distressing aspects of current duties"

Blue Highlight of text –	Witnessing distress of victims or distress due to job content e.g. attendance at fatal collisions or distressing scenes such as photography of suicide scenes or not being able to find the body of a missing person.
Red Highlight of text –	Legal issues/problems – e.g. lack of a good sentence or generally dealing with barristers/solicitors. Court process or system – insufficient evidence to proceed.
Yellow Highlight of text –	Administration issues/problems – lack of resources – staff or Material.
Pink Highlight –	Hours/fit with home life.
Grey Highlight –	Management/ internal problems/ politics/ limitations due to management
Teal Highlight –	Inadequate reward/pay
Violet Highlight –	Lack of support from others – external or internal (other police)
Dirty Green –(dark yellow) –	Problems with other government agencies
Brown writing –	Problem colleagues
Orange writing –	Time/workload issues too much workload – not enough time to complete tasks/paperwork.
Violet writing –	Other category – miscellaneous categories e.g., dealing with mental health issues or boredom

EXTRA – general duties categories

Blue writing – Attending or completing paperwork relating to domestic violence incidents (generally relates to general duties).

Green writing – Dealing with offenders

Bold black writing - False reports (generally pertaining to rapes/sexual assaults).

Question 23. "Why did you choose to work in the area you are currently employed in?"

Pink Highlight – Hours/suited home

Blue Highlight – To help people/victims

Yellow Highlight – Job satisfaction/challenge/ personality suited to the work or like the work

Green Highlight – Gain experience/career reasons or other functional reasons

Grey Highlight – To "make a difference" to do something that matters

Dirty Green/dark yellow – **A change from or avoid general duties** (comments such as to avoid dealing with "smelly" offenders or to avoid domestic violence/drunks etc. generally imply to avoid general duties work.

Teal Highlight – Variety or diversity in the work – not knowing what to expect from day to day.

Violet highlight – Status of job/ type of investigation or crime – implies a pecking order of crimes or implies the work location is the best location.

Violet Writing – Other category

Bright blue writing – Limited options – no choice due to family or career Limitations

Brown writing – Working with good colleagues

General notes:-

a) Blank responses for each question/work location are also counted as separate category.

b) Separate totals for homicide and sex crimes squad are counted then combined into category of Crime Squads to match quantitative data treatment.

c) Each participant can have answered with several clauses or sentences indicating several themes. Each theme is counted for that person e.g. Case 161. in "Others" answers for question 21 – best aspects of job - "Arrest of Offenders, team environment and successful results" – so their answer fits into 2 categories, Red for prosecuting offenders and brown writing for colleagues/teamwork. Even though they had 2 clauses pertaining to prosecuting offenders the theme is only counted once. Themes are counted once per participant (irrespective of how many times they mentioned something fitting in that theme).

Appendix C

Tables, 16, 17 and 18

Relating to Qualitative Data

Table 16

Number and Percentage of Respondents in Categories Relating to Question 21: What Are the Best Aspects of Your Current Duties (i.e. Most Rewarding or Satisfying Aspects)?

Work Location	*N*	Assist Victims/ help people	Good Work Colleagues	Success/prosecute Offenders	Management/pass on knowledge	Work challenge	Status	Other
Sex Crimes	6	3 (50%)	1 (16.7%)	5 (83.3%)	1 (16.7%)	1 (16.7%)	1 (16.7%)	1 (16.7%)
Homicide	16	8 (50%)	8 (50%)	6 (37.5%)	1 (16.7%)	7 (43.8%)	5 (31.2%)	3 (18.8%)
Crime Squads	22	11 (50%)	9 (41%)	11 (50.0%)	2 (9%)	8 (36.4%)	6 (27.3%)	4 (18.2%)
SOCAU	70	50 (71.4%)	13 (18.6%)	13 (18.6%)	8 (11.4%)	10 (14.3%)	0	8 (11.4%)
General Duties	49	16 (32.7%)	5 (10.2%)	10 (20.4%)	10 (20.4%)	1 (2.0%)	0	10 (20.4%)
Crime Scene Officers	42	18 (42.9)	5 (11.9%)	18 (42.9%)	1 (2.4%)	0	0	11 (26.2%)
Others	29	8 (34.8%)	7 (30.4%)	9 (31.0%)	2 (6.90%)	1 (3.5%)	0	12 (41.4%)
Totals	212	103 (48.6%)	39 (18.4%)	61 (28.8%)	23 (10.9%)	20 (9.4%)	6 (2.8%)	45 (21.2%)

Work Location	*N*	Better/flexible hrs/ family fit	Autonomy	Receiving appreciation	Job content variety	Forensic exam of scene	Blank/no response to qu.
Sex Crimes	6	0	0	0	0	0	0
Homicide	16	0	0	0	1 (6.3%)	0	0
Crime Squads	22	0	0	0	1 (4.6%)	0	0
SOCAU	70	8 (11.0%)	4 (5.7%)	4 (5.7%)	3 (4.3%)	0	1 (1.4%)
General Duties	49	2 (4.1%)	0	1 (2.0%)	7 (14.3%)	0	4 (8.2%)
Crime Scene Officers	42	4 (10.0%)	3 (7.1%)	4 (9.5%)	0	8 (19.1%)	3 (7.1%)
Others	29	5 (17.2%)	4 (13.8%)	1 (3.5%)	1 (3.5%)	0	1 (3.5%)
Totals	212	19 (9.0%)	11 (5.2%)	10 (4.7%)	12 (5.7%)	8 (3.8%)	9 (4.3%)

Table 17

Number and Percentage of Respondents in Categories Relating to Question22: What Are the Worst (Most Frustrating or Distressing) Aspects of Your Current Duties?

Work Location	*N*	Distress of Victims job content	Admin lack of resources/staff	Courts/legal issues	Problem Colleagues	Management/internal problems/politics	Hours
Sex Crimes	6	2 (33.3%)	5 (83.3%)	1 (16.7%)	0	2 (33.3%)	0
Homicide	16	3 (18.8%)	7 (43.8%)	4 (25.0%)	0	4 (25.0%)	3 (18.8%)
Crime Squads	22	5 (22.7%)	12 (54.6%)	5 (22.7%)	0	6 (27.3%)	3 (13.6%)
SOCAU	70	19 (27.1%)	10 (14.3%)	21 (30.0%)	5 (7.1%)	14 (20.0%)	1 (1.4%)
General Duties	49	6 (12.2%)	9 (18.4%)	10 (20.4%)	2 (4.1%)	13 (26.5%)	2 (4.1%)
Crime Scene Officers	42	6 (14.3%)	14 (33.3%)	1 (2.4%)	3 (7.1%)	6 (14.3%)	0
Others	29	7 (24.1%)	7 (24.1%)	6 (20.7%)	1 (3.5%)	7 (24.1%)	1 (3.5%)
Totals	212	43 (20.3%)	52 (24.5%)	43 (20.3%)	11(5.2%)	46 (21.7%)	7 (3.3%)

Work Location	*N*	Inadequate reward	Lack of support from other police	Other	DHS	Workload /timeframes	False reports	Blank
Sex Crimes	6	0	0	0	0	0	1 (16.7%)	0
Homicide	16	2 (12.5%)	1 (6.3%)	1 (6.3%)	0	0	0	0
Crime Squads	22	2 (9.1%)	1 (4.6%)	1 (4.5%)	0	0	1 (4.5%)	0
SOCAU	70	0	5 (7.1%)	7 (10.0%)	11 (15.7%)	6 (8.6%)	6 (8.6%)	0
General Duties	49	2 (4.1%)	1 (2.0%)	12 (24.5%)	1 (2.0%)	9 (18.4%)	0	2 (4.1%)
Crime Scene Officers	42	0	0	12 (28.6%)	0	3 (7.1%)	0	3 (7.1%)
Others	29	0	3 (10.3%)	7 (24.1%)	0	3 (13.6%)	0	1 (4.6%)
Totals	212	4 (0.1%)	10 (4.7%)	39 (18.4%)	12 (5.7%)	21 (9.9%)	7 (3.3%)	6 (2.8%)

Table 18

Number and Percentage of Respondents in Categories Relating to Question 23: Why Did You Choose to Work in the Area You Are Currently Employed In?

Work Location	*N*	Hours/suited home life	Job satisfaction suited to work	To help victims/ victim related	Functional/ to gain experience	To make a difference	Charge offenders/ justice
Sex Crimes	6	0	5 (83.3%)	1 (16.7%)	1 (16.7%)	0	0
Homicide	16	0	8 (50.0%)	2 (12.5%)	2 (12.5%)	1 (6.3%)	1 (6.3%)
Crime Squads	22	0	13 (59.1%)	3 (13.6%)	3 (13.6%)	1 (4.6%)	1 (4.6%)
SOCAU	70	12 (17.1%)	21 (30.0%)	20 (28.6%)	19 (27.1%)	8 (11.4%)	2 (2.9%)
General Duties	49	9 (18.4%)	13 (26.5%)	6 (12.2%)	9 (18.4%)	0	0
Crime Scene Officers	42	4 (9.5%)	18 (42.9%)	6 (27.3%)	11 (26.2%)	0	1 (4.6%)
Others	29	7 (24.1%)	10 (34.5%)	0	5 (17.2%)	3 (10.3%)	0
Totals	212	32 (15.1%)	75 (35.4%)	35 (16.5%)	47 (22.2%)	12 (5.7%)	4 (1.9%)

Work Location	*N*	Avoid general duties	Status	Work colleagues	Other	Limited options. No choice	Blank
Sex Crimes	6	0	1 (16.7%)	4 (25.0%)	1 (16.7%)		0
Homicide	16	0	8 (50.0%)	1 (2.2%)	2 (12.5%)		0
Crime Squads	22	0	9 (40.9%)	5 (22.7%)	3 (13.5%)		0
SOCAU	70	10 (14.3%)	0		12 (17.1%)	6 (12.2%)	1 (1.4%)
General Duties	49	0	2 (4.1%)	2 (4.1%)	7 (14.3%)		1 (2.0%)
Crime Scene Officers	42	16 (38.1%)	0	0	3 (7.1%)	0	2 (4.8%)
Others	29	4 (13.8%)	1 (3.4%)	2 (6.9%)	2 (6.9%)	1 (3.4%)	0
Totals	212	30 (14.2%)	12 (5.7%)	9 (4.3%)	27 (12.7%)	7 (3.3%)	4 (1.9%)